European Journal of Humanities and Educational Advancements (EJHEA)
Available Online at: https://www.scholarzest.com
Vol. 4 No.11, November 2023
ISSN: 2660-5589

ASSESSING THE IMPACT OF SCHOOL PLANT ON STUDENTS' ACADEMIC PERFORMANCE IN SECONDARY SCHOOLS IN TARABA STATE, NIGERIA

Danladi, Solomon[1] Awudu, Jesse Josephine [2]
[1]Department of Educational Psychology, College of Education Zing, Taraba State, Nigeria.
[2]Department of Educational Foundation, College of Education Zing, Taraba State, Nigeria.
E-mail: johniniyaks@gmail.com

Article history:

Received: September 10th 2023
Accepted: October 10th 2023
Published: November 17th 2023

Abstract:

The purpose of this paper is to investigate the impact of school supplies on the academic performance of secondary school students in Taraba State, with a particular emphasis on the effective use of library and laboratory resources. The survey's participants included 66,984 students and 4,062 teachers from Taraba State's 281 secondary schools, with a sample size of 200 drawn using stratified proportionate sampling techniques. The questionnaire data were analyzed using a descriptive study style, the null hypothesis was evaluated and t-test statistics were used to determine relationship and differences at $p \leq 0.05$. The researcher rejects the null hypothesis and concludes that there is a significant relationship between library, laboratory facilities, and academic achievement of secondary school students in Taraba State by comparing the p-value against the significant set by the study. The findings revealed an inadequate amount of library and laboratory resources in secondary schools in Taraba State. The study not only identified some of the issues that these schools were facing, but it also provided practical recommendations aimed at enhancing the learning environment and, as a result, academic accomplishment. Recommendations include encouraging the Taraba State Government to increase education funding, particularly for libraries. The document calls for joint efforts between the government and non-governmental organizations (NGOs) to improve facilities, with a focus on lobbying through various media channels such as television, radio, and social media. Furthermore, school administrators are encouraged to seek financial aid from alumni groups in order to rectify library and laboratory inadequacies.

Keywords: School Plant, Academic performance, Library, Laboratory, Secondary school.

INTRODUCTION

The word "school plant" refers to a school's physical infrastructure, buildings, and assets. It includes all of the structures, classrooms, playgrounds, equipment, and other physical aspects that contribute to a school's overall atmosphere and functionality. The school plant is critical in generating a pleasant learning environment for students and supporting the educational institution's successful operation. It has both indoor and outdoor areas, as well as many facilities and tools to help with teaching and learning (Glen, 2019). School plant planning refers to the systematic process of designing, organizing, and managing the physical infrastructure and facilities of a school. It involves careful consideration of the school's current and future needs to create an environment that is conducive to effective teaching and learning. School plant planning encompasses a range of activities aimed at optimizing the use of physical resources and ensuring that the school's facilities align with its educational goals and objectives. School plant planning play a vital role in the actualization of educational goals and objectives and it creates healthy school climate. These school facilities which include laboratory, library, and sport among others must be put together for effective teaching and learning (Glen, 2019). But unfortunately, the facilities are inadequate and even those available are out dated, broken and as such it cannot meet the goals of education of the 21st century. Currently, most of the school facilities which are supposed to promote and enhance teaching-learning and extra-curricular activities in secondary schools have always been a challenge to the needs of the students. The main objectives of school plant

planning are to satisfy educational goals (Oyesola, 2007). He further explains that needs of the teachers and students should be provided for effective instruction. But even all the needs of the teachers are provided without adequate facilities in place the programme would be hampered. The curriculum cannot be implemented if the physical facilities required for effective teaching are not adequate which can directly affect the quality of instruction. Teaching and learning in a school can only take place in school if there is provision of adequate laboratory facilities, library facilities because teaching and learning involves learning experiences and the interaction of the learners with their environment (Otu, 2002). That means without adequate provision of all these facilities in place that will meet the needs of both the teachers and the learners the goals of the education cannot be achieved.

The knowledge of school plant planning is timely especially in the present day, due to persistent increase in student's population in secondary schools without corresponding increase in school facilities for effective teaching and learning. This has put a considerable strain on school plants in most secondary schools in the country. The numbers of facilities such as libraries facilities, laboratories facilities, recreational facilities, sport facilities, etc. available for education remains inadequate for the eligible number of students. This is common in the urban areas where there is population pressure. Most of the school plants today were not in compliance or otherwise to structural position as enshrined in the school plant planning. Hence provisions were not made for future expansion in relation to enrolment, structural development and for better increase in school program. In order to have effective and efficient teaching and learning, school buildings, facilities should be closely related to the planning of school plant. The goals of Nigerian education as highlighted in the National Policy on Education (2004) which include the inculcation of national consciousness and the national unity, the inculcation of right type of values, the training of the mind in the understanding of the world around; the acquisition of appropriate skills and the development mental, physical and social abilities for the individual to live in and contribute to the development of the society. The above are goals of Nigerian education without adequate school plant or with faulty school plant in place the objectives will not be achieved. Adequate facilities in school improve the quality of instruction and create healthy school climate.

The primary aims of activity or program in school system is to argument and consolidate teaching and learning process. Oyesola (2007) remarked that better and developed school plant will enhance better school programme and the community needs by providing a place for psychological and physical safety for both students and teachers and also enhance better quality creative instructions. Thus, these include: Spatial Adequacy and Durability: This implies that there should be enough space for furniture expansion in relation to enrolment, structural development and for better increase in school program. In addition, space in the school environment warrants development in student's services and program, thus halls, sport out and in-door among others. Health and Safety: School plant development ensures safety, security and health care delivery for staff and students. Safety could be in building with safety and fire fighters' facilities. On health, there should be adequate ventilation and protection mechanism on pollution. Adaptability: School structure should be made to serve various purposes. This is aimed at withstanding the long term changing situation in school system. Therefore, school structures should be made to adapt to a large extend changing situation in terms of program. Durability: This is the ability of a project or program to stand the test of time in serving the purpose meant for. Aesthetics: This denotes environmental beautification with flowers and positioning of structures according to colours. It is believed that green environment has more nutrition breeze and encourages creative thinking. Hence the need for this study.

1.0 OBJECTIVES

The objectives of this research are as follows:

i. Evaluate the influence of library facilities on the academic performance of students in secondary schools located in Taraba State.
ii. Investigate the effects of laboratory facilities on the academic performance of students in secondary schools in Taraba State.

2.0 RESEARCH QUESTIONS

The following research questions would be answered:

i. To what extent do library facilities impact the academic performance of students in secondary schools in Taraba State?
ii. What are the specific effects of laboratory facilities on the academic performance of students in secondary schools in Taraba State?

3.0 RESEARCH HYPOTHESIS

The following hypothesis will guide the study

Ho_1: There is no significant difference between library facilities and student's academic performance in secondary schools in Taraba State.

Ho_2: There is no significant difference in the opinions of the respondents on the impact of school laboratory facilities on student's academic performance in secondary schools in Taraba State.

5.0 THE CONCEPTUAL FRAMEWORK

5.1 School Plant

School plant is defined by Isaac and Musibau (2010) as the process of identifying appropriate sites and developing classroom spaces, administrative spaces, circulation spaces, and recreational places to enhance teaching and learning activities in a school system. Thus, the school plant reflects the integration of the components that constitute the school a system. Osahon (2001) presents a more extensive list of educational facilities, which may be divided into the following categories:

1) School building: A physical structure utilized for educational purposes. Classrooms, labs, workshops, common areas/teachers' offices, restrooms, common rooms, study rooms, pharmacy, library, dormitories/dormitories, canteen, auditorium, and staff housing are among them.

2) School equipment refers to objects or expenditures such as machinery and tools that aid in the operation of learning activities. Other tools are necessary.

a) Desks, chairs, chalkboard, cabinets, shelves, dust, sinks, napkins, and school supplies are some examples.

b) Laboratory: physics, chemistry, biology, agricultural sciences, home economics, foreign languages, and geography, for example. School plant planning is an idea.

5.2 School Plant Planning

School plant planning involves all the activities of educational planners, architects, civil engineers and others who produce everything necessary to build a school for teaching and learning. Adeyemi (2006) defines school plant planning as the process of managing, constructing, operating and maintaining school facilities to ensure the achievement of objectives. This approach is also consistent with that of Undie (2007), who describes school building as a conscious decision-making process of allocation, use and maintenance of these facilities to maximize their utility and extend their lifespan. It is also described as an on-going process that seeks to make optimal use of educational resources to achieve desired educational goals.

5.3 Importance of School Plants

According to Oyesola (2007), the following are instances of the value of school plants:

i. Improved school amenities boost student achievement. Schools with decent pupils in standard classrooms that are free of noise and danger boost student success.
ii. Improved school amenities boost student attendance.
iii. Students are drawn to schools with superior school facilities, clean and beautiful middle schools with flowers, and recreational facilities. Three, school facilities improve teacher retention. A welcoming and roomy setting reduces teachers' workload (stress) and encourages them to work and stay in school.
iv. Plants in schools increase students' attitudes toward learning. School plants offer a welcoming learning atmosphere that supports and encourages both instructors and kids to study. Implementing appropriate facilities encourages learning in classrooms and throughout the school.
v. Implementation of school curriculum: A good school environment with options for future expansion is a good asset. This is because it accommodates changes and adjustments, such as growth in school structure as a result of enrolment.

5.4 Student Academic Performance

Students' academic performance at the West African Examinations Council (WAEC), according to Ogundele (2007), is the sum of their final examination scores. According to Dantani (2007), student performance is the degree of achievement demonstrated in an academic environment following a successful teaching-learning process. The degree of academic progress of a student determines the amount of enrolment for passing indicators in the educational system. In contrast, student success is regarded as an indicator of instructor productivity.

5.5 Impact of Libraries on Student Academic Achievement

The library is a crucial educational institution and a repository of knowledge that assists both instructors and students in developing their own skills. A good library is widely regarded as the most valuable asset to students in teaching and learning situations, second only to the instructor. The following are the purposes of school libraries, according to Adefarati (2002):

i. Encouraging the growth of learning capacities
ii. Encourage readers to assess their literacy skills.
iv. Establish an intellectual development clinic.
iv. It enriches the school curriculum by providing topic knowledge.

The government should construct model libraries in each school for the benefit of students. The library must be spacious and pleasant, capable of accommodating a large number of students, and provide pupils with access to a diverse choice of materials. In addition to textbooks, novels, journals, and other resources from the school library, there should be a section for reference volumes such as dictionaries (Seatre and Willars, 2002). The IFLA/UNESCO school library recommendations declare that "governments must develop strategies, policies, and plans to implement the declaration's principles, which clearly state the importance of school libraries and the need to establish them in all schools." The statement outlines the content and concepts that students learn, as well as how the information acquired may improve society and individual lives." School libraries help children develop long-term learning capabilities. This suggests that the school library is incredibly important in the school and in the lives of the students

since it provides the necessary information for school activities. Students can become responsible members of society as a result of the information they have received.

5.6 Impact of Laboratory on Student Academic Achievement

A laboratory is a structure or facility where scientific research is carried out. According to Ezeliora (2001), a laboratory is a workplace where scientific activities are carried out in an appropriate atmosphere. A laboratory, according to Luketic and Omiko (2014), is a distinct location, facility, or time period that is equipped and structured to conduct practical or experimental research. He also believes that laboratories serve as the cornerstone of a successful scientific education because they give students with experiences that correspond to the school's science competency goals. Researchers, on the other hand, agree that the laboratory is a location where students are introduced to reality. Furthermore, experimental techniques allow students to recover knowledge by using experimental processes. The West African Examinations Council (WAEC) and the Nigerian National Examinations Council (NECO) require school laboratories where students can finish practical courses for high school graduation based on the function of labs in scientific teaching and learning. You cannot study medicine, pharmacy, or engineering if you take certification examinations. As a consequence, a laboratory is a venue within a building where scientific instructors and students may work with instruments or equipment in controlled environments to solve natural problems. Recognizing the importance of laboratory facilities, effective teaching and learning need the availability of suitable laboratory facilities. School laboratories should include the following features:

i. Enough laboratory space to accommodate programs and equipment.
ii. Learning environments and resources must be developed to satisfy the needs of learners.
iii. Lab equipment should be suitable for both professors and students.
iv. Glass must be properly positioned and protected to avoid unintended contact with pupils and to ensure safety.

6.0 THEORETICAL FRAMEWORK

The systems theory of biologist Ludwig von Bertalanffy (1968) was adopted for this investigation. He stressed that genuine systems are open, interact with their surroundings, and gain qualitatively new qualities through emergence, leading in continual evolution. Instead of reducing the topic, such as the human body, the qualities of its pieces or elements are used. Cells or organs? As a result, systems theory focuses on the arrangements and linkages that connect components to the whole. This structure specifies a system that is not dependent on the content of its pieces. Systems theory, like particles, cells, and transistors, is a viewpoint that examines events as a whole rather than the sum of its components (Christiana, 2017). In the context of a school design plan, the preceding demonstrates that the system comprises of interacting components such as laboratory and library facilities. Schools are social systems, according to systems theory, and the overall efficacy of the school system is weakened when the overall components or subsystems that comprise the school as a system are lessened or absent. This implies that the school board must realize the interdependence of these components in order for a school organization to function efficiently.

Ibrahim (2015) conducted a study titled "Impact of Library Facilities on Academic Performance of Secondary School Students in Gombe State, Nigeria." The study's purpose was to examine at the availability and utilization of laboratory facilities at secondary schools in Gombe State. A descriptive research design was used. The study involved 835 students and learners from public schools. The sample size for the research was 350 people. A stratified and proportionate sampling approach was used to choose the sample. A questionnaire was used to collect data. The chi-square statistical approach was used. The study found an insufficient number of laboratory facilities in Gombe State, as well as a lack of utilization of laboratory facilities in Gombe State secondary schools. As a consequence, the government was advised to commit funds to the Ministry of Education in order to ensure the availability of laboratories in secondary schools as much as possible. Secondary school administrators must also ensure that Gombe has access to government laboratories.

The above study is significant to on-going research in the fields of descriptive survey design, research design, and survey design. However, there are significant differences, such as the fact that the previous study was conducted in Gombe, but this study was conducted in Taraba State. Stratified and proportional sampling methods, as well as basic random and proportional sample methods, were used in this investigation. Unlike previous studies, the present one applies Analysis of Variance (ANOVA). Musa (2017) conducted a study on the "Effect of Library Availability and Use on Academic Performance of Secondary School Students in Yobe State, Nigeria." The goal is to determine the level of library accessibility at Yobe State Secondary School. The extent to which library materials are used is evaluated. The study's population was 412 persons, and the sample size was 142. A descriptive research design was used. Stratified sampling was used to evaluate the questionnaire, and the null hypothesis was tested using multiple correlation and project planning management and control (PPMC). During the investigation, it was revealed that the facilities did not meet the criteria and were being utilized inappropriately. The preceding work is pertinent to ongoing research in descriptive survey design and survey design research. However, there are some distinctions: The earlier study was carried out in Yobe State, while the present study is being carried out in Taraba. In this study, stratified and proportional sampling methods were utilized, as well as basic random and proportional sample methods. Previously, many correlations were employed in investigations, but this study used analysis of variance (ANOVA).

Okafor (2014) investigated the "relationship between the availability of laboratory facilities and academic performance of high school biology students in Zamfara State, Nigeria." The purpose of this study was to look into the state of biology laboratories in secondary schools in Zamfara State in order to assess the degree of academic achievement of students who took biology classes. We employed a descriptive research design. The survey included 10,999 male and female students from both private and public schools. The study had 350 participants. The sample was chosen using a stratified and proportional sampling strategy. Data was gathered via a questionnaire. The statistical method chi-square was utilized. According to the findings, schools in Zamfara State lack proper functional biology laboratories. As a result, the Ministry of Education suggested that the inspection department head and the biology department conduct frequent inspections of public schools to ensure that the facilities are being used as intended. The aforementioned work is linked to on-going research in descriptive survey design, research design, and survey design. There are notable discrepancies, however, such as the fact that the prior study was done in Zamfara, whereas this study was undertaken in Taraba province. In this study, stratified and proportional sampling methods were utilized, as well as basic random and proportional sample methods. Previous research employed Chi-square, while the current study uses Analysis of Variance (ANOVA).

7.0 METHODOLOGY

7.1 Research Plans

The research design used in the study was a descriptive research design. This research design allows researchers to study samples and later generalize the results to the entire population (Osuala, 2007). Descriptive research is also used to collect detailed and authentic information that explains existing phenomena (Mustapha, 2015).

7.2 Population

The study population consists of 281 secondary schools in Taraba state with 4,062 teachers and 66,984 students.

7.3 Sampling

For the purpose of this study, Thirty (30) schools comprising of both public and private schools were sampled from six educational zones in Taraba State, from the sampled schools, a total of Ninety two (92) Students and one hundred and eight (108) Teachers with B.SC. ED, B.SC and N .C.E. were sampled using stratified proportionate sampling techniques. The sampling was done in line with the method for determining sample size from a given population by stratified sampling approach. The survey was titled "Effectiveness of School Plant Initiatives in Student Academic Achievement Questionnaire (ESPISAPQ)." The questionnaire consists of two parts. Section A consisted of respondents' bio-data and qualifications. Sections B-C of the instrument contains item descriptions to assess the impact of school plant on student achievement in secondary schools in Taraba State, Nigeria. Section B contains articles on the impact of library facilities on student learning. Section C contains articles on the impact of laboratory equipment on student performance. Sections B-C of the instrument contain 20 items organized on a 5-point Likert rating scale with response modes: Strongly Agree (SA), Agree (A), Undecided (U), Strongly Disagree (SD), and Disagree (D).

7.4 Data Analysis Methods

The data will be evaluated using descriptive and inferential statistics. The survey data will be examined using frequencies, simple percentages, and means to address the research questions stated in the study. Analysis of Variance (ANOVA) is used to test the null hypothesis.

8.0 RESULTS

8.1 Bio-Data of respondents

Table 1: Personal Data of the Respondents

Status	Frequency	Percentage (%)
Teachers	108	54
Students	92	46
TOTAL	**200**	**100**

Table 1 show that 108 Teachers, representing 54%, and 92 students representing 46% took part in the study. A total of 160 respondents representing 80.0% were males while 40 representing 20.0 % were females.

Table 2: Qualification of Respondents

QUALIFICATIONS	FREQUENCY	PERCENTAGE
1. NCE	67	33.5

2.	HND	23	11.5
3.	B.A	17	8.5
4.	B.Ed	39	19.5
5.	M.Ed	9	4.5
6.	Others	45	22.5
TOTAL		**200**	**100**

Table 2 shows the respondents' qualifications, with 67 having NCE representing 33.5%, 23 having HND representing 11.5%, 17 having B.A representing 8.5%, 39 having B.Ed, 9 having M.Ed representing 4.5%, and 45 having other qualifications representing 22.5%.

9.0 RESEARCH QUESTIONS

Since the instrument was designed along a modified five-point Likert scale to decide whether to accept or reject the study questions, the researcher utilized 3.0 as the mean (weighted mean), also known as the decision mean. As a result, a mean score of 3.0 or above suggests acceptance, whereas a mean score of less than 3.0 implies rejection. This is illustrated below.

9.1 Research Question One: To what extent do library facilities impact the academic performance of students in secondary schools in Taraba State? There are 1-10 items in the questionnaire. Thus, as shown in the table below.

Table 3: Respondents Opinion on the Impact of Library Facilities on Students' Academic Performance in Secondary Schools in Taraba State.

S/N	Item Statement	N	Mean
1	As predicted, the library is well-planned for students in school in order to develop students' reading habits, and so improve their reading habits.	200	2.19
2	There is sufficient space in the library for students to feel comfortable, which improves their performance.	200	2.60
3	Adequate and modern library facilities are appropriately arranged which motivates students and improves their performance.	200	2.50
4	Chairs and tables are suitably arranged for pupils to employ in leaning so as to increase their performance.	200	2.18
5	There are well-trained librarians who advise students on how to use the library and so enhance their performance.	200	2.11
6	There are a sufficient number of librarians who are constantly accessible to assist students in learning and thereby improving their performance.	200	2.16
7	Constant supply of light in the library to encourage students to use it and so enhance their performance.	200	2.08
8	In the library, computers with internet access are strategically placed to improve students' reading habits and, as a result, their performance.	200	2.13
9	Computers with internet connectivity are sufficiently prepared so that students may utilize computers and so improve their performance.	200	2.11

10	Newspapers are constantly available at the library for kids to develop their reading habits and learn.	200	2.19

From table 3 shows the mean score of respondents on Impact of library on students' academic performance in secondary schools in Taraba State. Item 1 was on whether the Library is well-planned for students in school as expected in order to improve students' reading habit, hence improve their reading habit. It was revealed that the item statement was rejected by all the respondents having mean score of 2.19. This shows that the respondents disagreed that library facilities in the schools is inadequate which affects students' academic performance. Item 2 showed the mean score of 2.60, which indicate rejection, meaning that there is no good and enough space in the library for students that make them feel comfortable, hence improve their performance. Item 3 was also rejected by all the respondents, with the mean scores of 2.50. Item 4 was on whether Chairs and tables are adequately planned for students to use in leaning so as to improve their performance; it was rejected by all the respondents with the mean score of 2.18.

Item 5 had mean score of 2.11. It was rejected by Teachers and rejected by students. It was rejected that there are no well-trained librarians that guide the students on the use of library, hence improve their performance. Item 6 showed the mean score of 2.16. Item 7 was rejected by all the respondents with the mean scores of 2.08. This implies that the respondents disagreed that there is no supply of constant light in the library to enable students feel motivated as to use of library, hence improve their performance. Item 8 have the mean scores of 2.13, indicate rejection of the item statement. Item 9 have the means score of 2.11was rejected by all the categories of respondents. Similarly, item 10 was also rejected by all the respondents with the mean score of 2.19. However, based on these result, one can established the fact that inadequate provision of library facilities in the schools affects students' academic performance in public senior secondary schools in Taraba State.

9.2 Research Question Two: What are the specific effects of laboratory facilities on the academic performance of students in secondary schools in Taraba State? There are 1-10 items in the questionnaire. Thus, as shown in the table below.

Table 4: Respondents Opinion on the Impact of Laboratory Facilities on Students' Academic Performance in Secondary Schools in Taraba State.

S/N	Item Statement	N	Mean
1	The science laboratory lab well-planned in school in order to improve academic performance of students	200	2.29
2	There is adequate planning of science laboratory facilities for students so as to improve their performance	200	2.50
3	Apparatus for science practical lesson adequately planned for students' academic performance	200	2.29
4	The space in the science laboratory lab well-planned for students to carry out practical, hence improve their performance	200	2.21
5	There are well trained technicians in the school laboratory that guide students, so as to improve their performance.	200	2.20
6	There are adequate numbers of technicians in the school laboratory that are always available for students' practical, so as to improve their performance.	200	2.67
7	The laboratory is well-planned in school to enable the students use in conducting practical so as to improve their performance.	200	2.31
8	The apparatus for practical are adequately planned for students practical so as to improve their performance.	200	2.11
9	Manuals that guide the students on how to use the apparatus planned so as to improve their performance.	200	2.23
10	There is well-planned space in the home economics lab for students to carry out practical so as to improve their performance.	200	2.64

From table 4 shows the mean score of respondents on impact of laboratory on student's academic performance in public senior secondary schools in Taraba State. Item 1 was on whether the science laboratory lab is well-planned in school in order to improve academic performance of students. It was revealed that the item statement was rejected by all the respondents with mean score of 2.29. This shows that the respondents disagreed those science laboratories facilities in the schools is not well planned and as such affects students' academic performance. Item 2 showed the mean score of 2.50 indicate rejection, meaning that there is no adequate planning of science laboratory facilities for students so as to improve their performance. Item 3 was also rejected by all the categories of the respondents, with the respective mean scores of 2.29. Item 4 was on whether space in the science laboratory lab well-planned for students to carry out practical, hence improves their performance; the responses were rejected by all the respondents with the mean score of 2.21.

Item 5 had mean score of 2.20, it was rejected by all the respondents which imply that, there are no well trained technicians in the school laboratory that guide students, so as to improve their performance. Item 6 was rejected by all the respondents with the mean score of 2.67. Item 7 was rejected by all the respondents with the respective mean scores of 2.23.This implies that the respondents disagreed that the home economics laboratory lab is not well-planned in school to enable the students use in conducting practical so as to improve their performance. Item 8 have the mean scores of 2.11, indicating rejection of the item statement. Item 9 have the means score of 2.23, it was rejected. Similarly, item 10 was rejected by all of the respondents with the corresponding mean score of 2.64. It was established therefore that laboratory facilities was inadequate in public senior secondary schools in Taraba State. Therefore, this a very big problem because if laboratory facilities are inadequate in the secondary schools it will affects learning and hence affects students' academic performance.

10.0 RESEARCH HYPOTHESIS

The test of hypotheses was carried out using t-test. This was determined at 0.05 level of significance. In all, two hypotheses were tested and acceptability or rejection of the Null Hypothesis was determined by comparing the p-value against the significant set by the study. Hypothesis is therefore rejected if the p-value is less than the level of significance set by the study.

10.1 HO_1: There is no significant difference between library facilities and student's academic performance in secondary schools in Taraba State.

There are 1-10 items in the questionnaire. To test this hypothesis, responses of all respondents were collected, analyzed and presented in a table using t-test. Thus, as shown in the table below.

Table 5: t-test on the Impact of School Library Facilities on Students' Academic Performance in Secondary Schools in Taraba State.

Variable	N	Square Mean	Sum of square	F	p-value
School Plant	200	6.87	48.15		
Academic achievement	200	2.45	113.5	6.21	0.000

From table 5, the F-value is 6.21 and the P-value is 0.000 at 0.05 levels of significance. Since the P-value obtained is less than the level of significance set for the study, the hypothesis is therefore rejected, thus, there is significant difference between library facilities and student's academic performance in secondary schools in Taraba State.

10.2 HO_2: What are the specific effects of laboratory facilities on the academic performance of students in secondary schools in Taraba State?

There are 1-10 items in the questionnaire. To test this hypothesis, responses of all respondents were collected, analyzed and presented in a table using t-test.

Table 6: t-test on the impact of school laboratory on Students' Academic Performance in Secondary Schools in Taraba State.

Variable	N	Square Mean	Sum of square	F	p-value
School Plant	200	0.16	21.15		
Academic achievement	200	2.75	135.43	0.49	0.00

From table 6, the F-value is 0.49 and the P-value is 0.001 at 0.05 level of significance. Since the P-value is less than the level of significance set for the study, the null hypothesis is therefore rejected, thus, there is significant difference in the opinions of the respondents on the impact of school laboratory facilities on student's academic performance in secondary schools in Taraba State.

Table 7: Analysis of Variance (ANOVA) on the impact of library facilities on Students' Academic Performance in Secondary Schools in Taraba State.

Computed r	r. Square	Adjusted r Square	Standard Error	Beta	T	p-value	Decision
-.517	.72327	.72035	4.48835	-.37507	-11.835	.000	Sig

Based on data in table 7, 72% of secondary school students' achievement in secondary school is significantly attributed to library facilities, the remaining 28% is negatively influenced. This suggests that the more the availability of library facilities, the better the achievement in education. Table 7 also shows that the p value (0.000) is less than the alpha level (0.05). As a result, the researchers reject the null hypothesis. This implies there is a correlation between library facilities and secondary school students' academic achievement in Taraba State.

Table 8: Analysis of Variance (ANOVA) on the impact of Laboratory facilities on Students' Academic Performance in Secondary Schools in Taraba State.

Computed r	r. Square	Adjusted r Square	Standard Error	Beta	T	p-value	Decision
-.3810	.83145	.83026	5.2055	-.46204	-10.160	.000	Sig

Table 8 shows that effective laboratory facilities account for 83% of secondary school students' academic achievement; this means that the remaining 17% of students' academic achievement is negatively impacted, implying that the more effective the laboratory facilities, the higher the academic achievement of students in Taraba state secondary schools. Based on the above assertion in table 8, the researcher rejects the null hypothesis and concludes that there is a significant relationship between laboratory facilities and academic achievement of secondary school students in Taraba State.

11.0 DISCUSSION

11.1 Research Question One: Seek to determine the influence of libraries on students' academic achievement in secondary schools in Taraba State, Nigeria. This study discovered that a lack of library facilities in schools had an impact on students' academic performance in Taraba State secondary schools. To increase productivity in schools, suitable libraries with computers, internet access, and a continuous power supply should be supplied. Students' academic achievement in their final exams will suffer as a result of a lack of this. A well-equipped library, according to Thanuskodi (2009), is the cornerstone of modern educational institution. Students can build learning skills by having access to and using school library books and learning tools. In view with the research null hypothesis; which assert that there is no significant relationships between school library and Students' Academic Performance in Senior Secondary Schools in Taraba State was rejected?

11.2 Research Question Two: sought to assess the impact of laboratory on student's academic performance in secondary schools in Taraba State, Nigeria. Some variables relevant to this question were analyzed with a view to provide objective analysis. From the finding, it was established that laboratory have significant impact on students' academic performance in secondary schools in Taraba State. In order to enhance productivity in schools, adequate laboratory should be provided to schools. Lack of these will affect students' academic performance in their terminal examination. It is in this view that Taraba State government should try its best to provide these laboratories necessary for teaching and learning. According to Abdulkarim (2003) emphasized the importance of laboratory in enhancing effective teaching and learning. In view with the research null hypothesis; which assert that there is no significant relationships between laboratory facilities and Students' Academic Performance in Senior Secondary Schools in Taraba State was rejected.

12.0 CONTRIBUTION TO KNOWLEDGE

The research dubbed "Assessing the Impact of School Plant on Students' Academic Performance in Secondary Schools in Taraba State, Nigeria" could encompass the following contributions:

1. Informing Taraba State educational policy and planning by offering insights into how the school plant (physical infrastructure, amenities, and resources) effects students' academic achievement. The findings of the study can be utilized to influence decisions about school infrastructure construction and resource allocation.
2. Learning Environment Improvement: Making practical recommendations to improve the learning environment in secondary schools. This may include proposals for enhancing school buildings, classrooms, libraries, labs, and other school plant components in order to improve students' academic achievements.
3. Challenge Identification: Identifying problems and constraints within the school plant that may impede academic success. This can assist educational officials and school administrators in addressing particular concerns influencing students' learning experiences.

4. Decision-Making Empirical Evidence: Providing empirical evidence on the link between the school plant and academic success. Educational policymakers, administrators, and stakeholders may utilize this information to make educated decisions about budget allocation, infrastructure development, and educational changes.
5. Educational Research Contribution: Making a contribution to the body of educational research by addressing a specific component of the educational system. This study contributes to the current body of information by providing a context-specific understanding of the influence of the school plant on academic achievement.
6. Long-term Educational Impact: Contributing to the long-term development of educational results in Taraba State by addressing elements beyond the classroom, with a focus on the impact of the physical environment in students' overall academic achievement.
7. Policy suggestions: Based on the research findings, provide specific policy suggestions. These suggestions might address systemic concerns, legal frameworks, or standards for preserving and modernizing school infrastructure to enhance academic performance.

13.0 RECOMMENDATIONS

The specific recommendations of the study "Assessing the Impact of School Plant on Students' Academic Performance in Secondary Schools in Taraba State, Nigeria" would be based on the study's results and conclusions. Here are some possible suggestions:

1. Urging the Taraba State Government to raise education financing in order to improve school infrastructure such as classrooms, libraries, labs, and other amenities. Ensure that these areas are conducive to studying and that students are in a good environment.
2. Create and implement effective resource allocation methods to guarantee that schools have the essential teaching and learning materials, equipment, and resources. Working together with educational authorities and lawmakers to prioritize financing for educational infrastructure may be required.
3. The study also advocates for collaborative efforts between the government and Non-Governmental Organizations (NGOs) to enhance facilities, with an emphasis on lobbying using various media channels such as television, radio, and social media.
4. School administrators are urged to seek financial assistance from alumni groups to address library and laboratory deficiencies.
5. Stress the need of routine repair and upkeep of school infrastructure. Establish processes for routine inspections, repairs, and upgrades to address wear and tear and avoid infrastructure deterioration over time.
6. Integrate current technologies into the school building to improve the learning environment. Ensure that schools have access to current technological resources such as computers, internet connection, and instructional software.

REFERENCES

1. Abdulkarim, A.Y (2003). An Analysis of the Provision and Management of Facilities In Kwara State Primary Schools. *Abuja Journal of Education 5(1).* 1-11.
2. Adefarati, E.O (2002). *Essentials of Library In Education,* Crofess Computers, Ondo. P.6.
3. Adeyemi, T. O. (2006). Managing students' crisis in secondary schools in Ekiti State, Nigeria: A critical analysis. *Sokoto Educational Review*, 8 (2) 43-60.
4. Bertalanffy, L. von. (1968). *Problems of Life*. New York: Harper Torch books.
5. Christiana, M. (2017). *A Brief Review of System Theories and Their Managerial Applications*. Retrieved From
6. http://pubconline.informs.org.on 18-11-2023,12:36:48.
7. Dantani, S. M (2007) *Physical Resources and Students Academic Performance In Kebbi State*. A Seminar Presented to
8. 14/4/2007 at University of Ilorin.
9. Ezeliora, R. (2001). *A Guide to Practical Approach To Laboratory Management And Safety Precautions*. *Daughters of*
10. *Divine Love Congregations: Enugu:* Divine Love Publishers.
11. Glen, I.E. (2019). *Planning Educational Facilities: what Educators Need to Know*. Rowman & Littlefield, United Kingdom. 5th edition.
12. Ibrahim, Y. (2015). Impact of School Plant Provision on The Management of Teaching And Learning In Secondary
13. Schools In Taraba State. *Ahmadu Bello University, Unpublished. ED Thesis*.
14. International Federation of Library Association (2009). *The School Library in Teaching and Learning for* All Retrieved
15. On January, 2013 From: http://archive.ifla.org.
16. Isaac, A.A AndMusibau, A. Y. (2010). School Plants Planning and Students Learning Outcomes In South West Nigerian
17. Secondary Schools. *International Journal of Science Education Kanka Raj.* 2 (1) Pg 47-53.

18. Luketic, C. D & Omiko, E. L. (2014). Factors Influencing Students Perceptions of High-School Science Laboratory
19. Environments. *Learn Environ Res.* 16(1), 37-41.
20. Musa, B. (2017). *Impact of Availability and Utilization of Biology/Chemistry Laboratory Facilities on Students'*
21. *Academic Achievements in Secondary Schools* in Yobe State, Nigeria.
22. Mustapha, I. A. (2015). *Basic Concepts in Educational Research*, Tunlad Prints and Publishing Company, Number 17,

Beirut Road, Kano.

23. National Policy on Education (2004). 4th Edition, Abuja. National Education Research Development Council Press
24. Ogundele, M. O. (2007). Teachers Job Satisfaction and Students' Academic Performance of Kwara State Private
25. Secondary Schools*. A paper Presented At University of Ilorin 14/6/2007.Olaniyomi, S.O. (2007). School Plant Planning*
26. *Lagos:* Olu-Akin Publishers.
27. Otu, D.O. (2002). The Effects of the Environment on Pupils Learning: A case study of schools in Zaria Metropolis,
28. Kaduna State. *The UBE Forum* 2(2). Pp 11-20.
29. Oyesola, G.O. (2007). Planning Education Building Facilities *Alphabetic List of Journal Articles,* Ilorin. Paper Presented
30. At The 2nd*Annual Conference of Science Teachers Association.*
31. Okafor, A. I. (2014) Investigating Relationships Between Availability Of Laboratory Facilities And Academic Performance In Biology Among Senior Secondary School Students In Zamfara State, Nigeria**.** *Unpublished Ed. Thesis.*
32. Oluchukwu, J. (2000). *Challenges of Educational Planning in the 21st Century*: In Olagboye, A.A. Fadipe, J.O. (Eds) Management of Nigerian Education: School Project Monitoring and School Plant Maintenance. NIEPA, Ondo.
33. Osahon, U. G. (2001). *Facilities Management in School. Benin City*. Mabogun Plishers
34. Oluchukwu (2000). Challenges of Educational Planning in the 21st Century: In Olagboye, A.A. Fadipe, J.O.
35. (Eds) Management of Nigerian Education: School Project Monitoring and School Plant Maintenance.
36. NIEPA, Ondo
37. Osuala, E. C. (2007*). Introduction to Research Methodology.* (3rd ed.). Onitsha: African – First Publishers Ltd.
38. Saetre, P.T. & Willars, G. (2002). Eds. IFLA/UNESCO School Library Guidelines *International* Federation of Library
39. Association And Institutions: *The Hague, 27. IFLA Professional Reports, Nr77.*
40. Thanuskodi, S. (2009). The Environment of Higher Education Libraries in India. *Library philosophy and practice.1*(2).
41. Undie, J.A. (2007). *Educational Governance.*Calabar. Tabson Press.