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Impact of School Facilities on Academic Performance of Senior Secondary Students in Lafia, Nasarawa State

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Abstract
This study examined the Impact of School Facilities on Students' Academic Performance in Senior Secondary Schools in Lafia Local Government Area, Nasarawa State. The population of the study comprised both public and private senior secondary schools' teachers and students. The study adopted descriptive survey research design. Simple random sampling was used to select 140 teachers and 129 SSS2 students from four secondary schools. Two hypotheses were formulated to guide the study. The instruments used for data collection were Proforma for students' test scores and a thirty-item questionnaire titled "Teachers Perceived Impact of School Facilities on Students' Academic Performance in Senior Secondary Schools in Lafia Local Government Area (TPISFSAPQ)". The validity index of each section of the questionnaire stood at 0.85, 0.73, 0.80, 0.76 and 0.88 respectively. Mean and standard deviation were used to answer the research questions; Multiple Regression was used to test the hypotheses at 0.05 level of significance. Findings revealed that school facilities have high impacts on students' academic performance. Also, school facilities variables did not significantly predict students' academic performance in English Language and Mathematics. Based on the findings of this study, it was concluded that school facilities provide better quality and richer environment for students, while making teaching more enjoyable for teachers. It was therefore recommended among others that school managers should carry out a comprehensive inventory of school facilities to obtain information on the components, policies and procedures of new or existing facilities.

Keywords: School Facilities, Academic Performance, Senior Secondary Students

Introduction

In many secondary schools in Nigeria, classrooms, libraries, and laboratories are nothing to write home about, all leading to decline in academic standards and achievement (Odia & Omofonmwan, 2007; Eniayewu, 2005). The school plant also includes the space within the school premises, which houses the basic systems and structures such as: machinery, vehicles, sport grounds, equipment, buildings, furniture, fixtures and fittings, electrical infrastructures, books, water supply infrastructures and accessories. An effective school facility is to cater for health, safety, comfort, convenience and aesthetically pleasing learning environment and responsive to the changing programs of education delivery and development. Theodore (2010) carried out a study on managing school facilities and students' academic use performance in which facilities organization is embedded. Omiko (2015) stressed that science laboratories provide students with the richest experiences which they will transfer to society and their various places of work. The Federal Government Annual Report on Department of Education (1952) as cited by Akinsolu (2004) stated that "the furniture is still inadequate and poor, schools have no desks for infant classes, and the children merely sit on the floor…". The conditions have not improved considerably in present-day school. The quality of output and institutional attainment has been attributed to the provision of adequate educational facilities which include a well-planned and purposeful school building (Rahma, 2022). Young (2003) stated that new facilities can influence higher achievement of students. The problem under study has to do with an unsatisfactory condition of the educational system being operated in Nigeria. The establishments

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of government schools and private schools have resulted in a situation whereby some schools were favoured in terms of the provision of rich facilities than others. It has been very difficult if not impossible for the government to standardize the school facilities. Conducive classrooms are essential for fostering a productive learning environment, facilitating the sharing of experiences, and testing research findings for potential implementation. The National Policy on Education (2013) stipulates an optimal class size 40 students per class in Nigeria. However, the reality in many senior secondary schools is far from this ideal. Class sizes have become increasingly unwieldy, making it challenging for teachers to provide individualized attention to students' needs. In many Nigerian senior secondary schools, class sizes often range from 60 to 75 students or more, far exceeding the recommended standard (Sesugh, 2012). This situation underscores the need for effective strategies to manage large class sizes and ensure that students receive the support they need to succeed. Where school facilities are inadequate, the teaching and learning process will be hampered.

The researcher's fieldwork and interaction with teachers as well as literature evidence revealed that the learning conditions of students in many schools are unhealthy and deplorable. Most of our schools have old, dilapidated structures (laboratories, libraries, workshops, studios) and deplorable environments. Poor academic performance in both external and internal examinations has been attributed to lack or inadequate facilities that can aid critical thinking required to pass examinations without giving undue assistance to students in examination halls. This problem propelled the researcher to find out if there is a relationship between school facilities and academic performance. That is if school facilities have an impact on the academic performance of senior secondary school students in Lafia local Government area of Nasarawa State.

Instructional materials play a pivotal role in enhancing students' academic performance by engaging in their senses and facilitating effective learning experiences. Today's education landscape demands innovative teaching methods to capture students' attention and foster their learning. Ojelade et al., (2020) highlights the importance of instructional materials in appealing to the senses of sight, hearing, touch, smell, and taste, catering to the learning preferences of the virtual generation. Enriching the learning environment, instructional materials aid teachers in delivering lessons effectively while promoting academic standards, particularly in science-related subjects (Abidoye & Abidoye, 2021). These materials help teachers illustrate concepts vividly, enhancing students' understanding and knowledge acquisition (Olayinka, 2025). According to Bassey et al., (2023), instructional materials assist teachers in presenting lessons logically, facilitating sequential explanations and improving the quality of teaching and learning activities. Instructional materials encompass visual, audio, and audio-visual aids, catering to different learning styles and preferences. Visual aids, such as chalkboards, charts, textbooks, and real objects, appeal primarily to the sense of sight, aiding in visual learning and information retention. These aids enhance lesson plans and capture learners' attention, stimulating thinking and cognition (Azi & Dajan, 2022). Audio aids, including recorded materials played back via recorders, gramophones, or radios, appeal to the sense of hearing, enriching teachers' presentations and supplementing language classes. They reach a broader audience simultaneously, making them effective for large-scale learning dissemination (Akinboboye et al., 2019).

Combining auditory and visual elements, audio-visual aids engage both sight and hearing senses simultaneously, enhancing learning experiences (Ojelade et al., 2020). Examples include films, slides, transparencies, and televisions/video tapes, which facilitate dynamic and realistic learning. These aids promote information retention in long-term memory and improve comprehension in various domains of learning (Asogwa et al., 2021). Studies have shown that instructional materials significantly impact students' academic performance, particularly in science subjects (Abidoye et al., 2022). They contribute to improved comprehension, faster learning, and better performance, with audio-visual aids proving effective for both male and female students. However, challenges such as non-availability and inadequacy of instructional materials hinder effective teaching and learning, leading to poor academic performance. Many schools lack essential materials, creating an unconducive learning environment. In addressing these challenges, teachers play a crucial role in improvising instructional materials to achieve lesson objectives (Olayinka, 2025). While it is the responsibility of school authorities to provide necessary materials, teachers can utilize their manipulative skills to improvise and enhance learning experiences (Abidoye & Abidoye, 2021). Despite challenges in availability, teachers' improvisation skills can mitigate these challenges and contribute to meaningful learning outcomes.

Laboratory facilities play a crucial role in enhancing students' academic performance in science subjects, serving as essential environments for practical work and hands-on learning experiences. Ezeliora (2001) defines a science laboratory as a workspace conducive to scientific activities, equipped with necessary tools and materials for

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experimentation. Without equipped laboratories, effective science education is hindered, as practical work is an integral part of science instruction (Gagare, 2024; Abidoye, 2021). Omiko (2015) emphasizes that laboratory experiences foster inquiry, scientific skills, and the right attitude toward scientific tools and materials, leading to better academic outcomes compared to traditional lecture-based methods.

Practical work in laboratories bridges the gap between theory and real-life applications, motivating students and aiding in their understanding of scientific concepts (Outlander & Crelsson, 2006). Schools lacking laboratories fail to provide essential practical experiences, leading to students' inadequate preparation for examinations such as those conducted by the West African Examination Council (WAEC) and the National Examination Council (NECO) (Omiko, 2015). As a result, students may lack the qualifications necessary for science-related careers. The availability and effectiveness of laboratory facilities significantly impact science education. Abimbola (2001) stresses the importance of well-designed, stocked, and safe laboratories for active practical exercises, ensuring that students receive hands-on learning experiences. However, challenges arise regarding the accessibility of materials and equipment, with teachers often facing constraints in utilizing laboratory methods due to shortages or inadequate storage facilities (Hamidu et al., 2014). Relying on neighbouring institutions for laboratory resources can be insufficient for students' practical learning needs. Having a well-equipped laboratory within the school is crucial for providing students with hand-on experiences, better access to equipment, and enhanced learning outcomes (Zailani & Usman, 2024; Gagare, 2024). To address these challenges, there is a need for secondary school laboratories to be equipped with adequate facilities to support effective science teaching and learning (Dairo et al., 2025). Teachers' qualifications also play a crucial role in students' academic performance, with professional expertise in specific fields complementing academic qualifications (Asikhia, 2010). Furthermore, teaching methodologies and environments significantly impact learning outcomes, with poor teaching processes hindering educational development (Musa et al., 2025). Inexperienced teachers and difficulties in teaching methodology and content contribute to students' poor performance in examinations (Dairo et al., 2025; Gagare, 2024). Despite the importance of experienced teachers, government efforts to engage them may be hindered by funding constraints (Tahir, 2003). To overcome these challenges and boost students' academic performance in science subjects, it's essential to invest in two key areas: upgrading laboratory facilities and providing teachers with comprehensive training.

Library facilities play a crucial role in shaping students' academic performance by fostering a culture of reading and providing essential resources for learning. Reading is universally recognized as a means of acquiring knowledge, broadening awareness, and building maturity (Kim & Anderson, 2011). The library serves as a solitary space where effective studying and learning can take place, offering access to a diverse range of materials. School libraries, as observed by Agbo (2015), are integral to the intellectual development of students, providing a wide array of resources including books, magazines, newspapers, films, tapes, and recordings. Access to these resources positively influences students' reading fulfillment and academic success (Jaja & Kanya, 2025). Newspapers, for example, contribute to students' reading skills development and keep them informed about current affairs. Studies have shown that well-equipped and adequately staffed school libraries lead to higher student achievement, regardless of socioeconomic backgrounds (Lonsdale, 2003). Library services not only aid students in their studies but also assist teachers in teaching and research activities (Ayodele et al., 2025). Reading materials available in libraries positively impact students' vocabulary, grammar, comprehension, writing, and spelling skills (Edom & Douglas, 2024). However, challenges such as outdated and irrelevant collections, underfunding, and poor infrastructure hinder the effectiveness of school libraries. Many libraries lack up-to-date books, magazines, and resources essential for teaching and learning. The growth of school libraries in Nigeria has been haphazard, often resulting in libraries that are more like storage spaces for outdated materials rather than vibrant learning hubs (Ikegbusi et al., 2022).

The poor academic performance of Nigerian secondary school students, as reflected in examination results, underscores the need for effective library services to promote reading habits and academic achievement. Research has shown a significant relationship between library services and students' academic performance (Uchenna & Ozoemena, 2025). The instructional role of library media specialists and the availability of resources shape students' academic achievements (Ikegbusi et al., 2022). Despite challenges such as inadequate funding and outdated collections, efforts to enhance library services are crucial for improving students' academic outcomes.
Class size is a significant factor influencing students' academic performance, with various definitions and classifications contributing to the ongoing discourse. According to Adeyemi (2023), class size refers to the average number of students per class, whereas Wadesango et al (2016) emphasize the number of students taught by a single teacher. Globally, the optimal class size varies, with UNESCO recommending an ideal class size of 25

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students. In Nigeria, the national policy on education (2013) stipulates the average of 40 students per class. Physical classrooms also play a significant role in shaping students' academic success. A well-arranged classroom fosters a conducive learning atmosphere, while quality furniture such as desks and chairs, enhancing the teaching and learning experience. Effective classroom management and design are essential for promoting academic achievement and creating a supportive learning environment. However, many public schools lack adequate infrastructure, leading to dilapidated structures and insufficient seating arrangements. Furthermore, ventilation, lighting, and acoustics significantly impact the learning environment. Poor ventilation can lead to increased carbon dioxide levels, affecting breathing conditions and causing discomfort (Emmanuel et al., 2020). Inadequate lighting may cause visual impairments and headaches, while improper acoustics can hinder concentration and reduce attentiveness.

Classroom size has a profound effect on teaching effectiveness and student performance. Larger class sizes make it challenging for teachers to provide individual attention, resulting in dissipated focus and increased disciplinary issues (Garba et al., 2023). Research indicates that schools with smaller class sizes tend to achieve better academic results in examinations (Adeyemi, 2023; Iniaghe & Osiobe (2024) and Akinboboye et al., (2020)). Additionally, smaller classes allow for more in-depth content coverage and increased student engagement. Adequate physical classroom facilities and smaller class sizes contribute to a conducive learning environment, facilitating individual attention, active participation, and better academic outcomes.

Sports and Games have a significant and lasting impact on students' academic performance. Martinez (2024) emphasized that engaging in sports and games not only enhances physical and mental fitness but also prepares students to effectively manage various curricular and extracurricular activities, ultimately improving their academic performance. Participation in sports fosters energy, health, unity, cooperation, and social skill development. Sports and games positively impact academic achievement by alleviating stress, preventing cognitive overload, and promoting psychological well-being. The benefits of sports extend beyond physical health to include improved academic performance and overall well-being for students (Li, 2023). Regular physical activity supports the healthy development of various bodily systems and enhances cognitive abilities, contributing to academic success (Martinez, 2024). Physical education in schools plays a crucial role in promoting sports participation and overall student development (Yarwah & Agyei, 2020). Research suggests that sports and extracurricular activities are essential for students' holistic development and academic success.

Extracurricular activities, including sports, enrich students' skills, discipline, and creativity, providing opportunities for socialization and peer integration (Kazuzuru & Ibrahim, 2021). These activities reinforce learning, supplement coursework, and democratize knowledge, contributing to students' overall development. By participating in extracurricular activities, students learn new skills, integrate with others, and enjoy leisure time, which enhances their academic performance. Moreover, school facilities play a crucial role in supporting students' academic and extracurricular activities. Infrastructural facilities, such as classrooms, laboratories, libraries, and sports fields, provide essential resources for learning and physical activities (Davis & Kim, 2024; Barth, 2022). Quality instructional facilities, such as teaching materials and equipment, are essential for effective teaching and learning. Additionally, a well-maintained physical environment, including playgrounds and sports fields, plays a significant role in promoting students' overall well-being and holistic development.

Aim and Objective of the Study

This study aims to explore the relationship between school facilities and academic performance among senior secondary school students in Lafia Local Government Area, Nasarawa State.

Hypotheses

This research investigated the following null hypotheses, with a significance threshold of 0.05.

$H0_1$: Instructional material, laboratory, library, class size and sport and game will not significantly predict students' academic performance in English Language.

$H0_2$: Instructional material, laboratory, library, class size and sport and game will not significantly predict students' academic performance in Mathematics.

Material and Methods

The study encompassed public and private senior secondary schools in Lafia Local Government Area, Nasarawa State, with population size unspecified due to data decentralization. It was not possible for the researcher to visit all the secondary schools in Lafia Local Government Area looking for the data. Available records indicate that

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there are 73 public secondary schools and 86 private secondary schools in Lafia Local Government (Nasarawa State Ministry of Education and National Association of Proprietors of Private Schools, Lafia Zonal Office, 2022). The researcher randomly selected four schools due to time and budget constraints, totaling 285 teachers and 2,913 students. One hundred and forty teachers (35 from each school) and 129 students (out of 247) were sampled. Demographically, 51.9% of sampled teachers were male, 48.1% female, with varying educational qualifications and teaching experiences. All participants provided informed consent before participating in the study. They were aware of the purpose, benefits, and potential risks of the study. They were assured of confidentiality and voluntary withdraw from the study without penalty or consequences. Data collection utilized a structured 30-item questionnaire, focusing on school facilities' perceived impact on academic performance. The questionnaire included demographic details, and five sub-sections related to instructional materials (e.g. the effective use of instructional materials in teaching can significantly enhance the level of assimilation and understanding of students, e.t.c.), laboratory(e.g. students got motivated to learn when taken to the laboratory for practical work e.t.c.), library (e.g. use of library space relates positively to students learning and better academic performance), class size (e.g. small class size positively affects the performance of students than large class size e.t.c.), and games (e.g. sports serve as a good stress reliever and this will enables the students to concentrate on their studies e.t.c). Validity was ensured through face and content validation by experts, while reliability was confirmed through trial tests yielding a coefficient of 0.80. Researchers obtained permission from school principals, trained research assistants, and administered 140 questionnaires, retrieving 129 (92%) along with SSS2 students' mock exam results which were converted to z-score for fair comparisons among the schools. Hypotheses were tested using Multiple Regression of SPSS 27.0. Overall, the study aimed to explore the relationship between school facilities and academic performance among senior secondary school students in Lafia Local Government Area, Nasarawa State, utilizing a sample of teachers and students from randomly selected schools.

Testing of Hypotheses

Research Hypothesis 1: Instructional materials, laboratory, library, class size, sport and game will not significantly predict students' academic performance in English Language.

To test this research hypothesis, a simultaneous multiple regression analysis was carried out to assess the combined impact of instructional material, laboratory, library, class size, sport and game on students' academic performance in English Language. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity.

Table 8: Multiple Regression results of the Impact of School Facilities on Students' Academic Performance in English Language

Model	Unstandard Coeffficient (B)	Standard Error	Standard Coeffficient (Beta)	t	Sig
Constant	69.875		10.791	6.485	.000
Instructional Material(X1)	.434	.385	.168	1.127	.266
Laboratory(X2)	-.749	.568	-.208	-1.319	.194
Library(X3)	-.123	.199	-.104	-.618	.540
Sport & Game(X4)	.088	.415	.036	.211	.834
Class Size(X5)	.363	.165	.311	2.197	.033
Multiple R	.344		R square	.118	
Observation	129		F-Statistics	1.079	
			F-significance	.426	

*p<0.05

Dependent variable: Academic performance Independent variables: Constant, Instructional Materials, Laboratory, Library, Sport and Game and Class size (school facilities).

The correlation between academic performance and independent variables is shown by R (0.344), while R square (0.118) estimates the relationship strength with school facilities. With a low R square, formal hypothesis testing was not possible. F-statistics (1.079) and F-significance (.426) indicate no significant relationship between explanatory variables and academic performance. The multiple regression model explains 11.8% of academic performance variance, with the remaining 88.2% attributed to external factors. Parameters' values are standard errors, with coefficients reflecting individual variable relationships. Instructional Materials and Library negatively affect performance insignificantly, while Sport and Game positively affect English Language performance

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insignificantly. Class size significantly improves English performance. The prediction equation is Y = 69.875 + 0.434(X1) – 0.749(X2) – 0.123(X3) + 0.088(X4) + 0.363(X5), where X1-X5 represent variables.

Research Hypothesis 2: Instructional materials, laboratory, library, sport and game and class size will not significantly predict students' academic performance in Mathematics.

Table 11: Multiple Regression results of the Impact of School Facilities on Students' Academic Performance in Mathematics

Model	Unstandard Coefficient B	Standard Error	Standard Coefficient Beta	t	Sig
Constant	41.415		16.543	2.504	.014
Instructional Material(X1)	.315	545	.055	.578	.564
Laboratory(X2)	-.081	.851	-.010	-.095	.925
Library(X3)	-.585	.388	-.164	-1.508	.134
Sport & Game(X4)	1.616	.694	.248	2.330	.022
Class Size(X5)	-.229.	.348	-.062	-.657	.513
Multiple R	.234		R square	.055	
Observation	129		F-Statistics	1.439	
			F-significance	.259	

*p<0.05

Dependent variable: Academic performance

Independent variables: Constant, Instructional Materials, Laboratory, Library, Sport and game and Class size (school facilities).

The correlation between academic performance and independent variables is shown by R (0.234), while R square (0.055) estimates the relationship strength with school facilities for Mathematics. With a low R square, formal hypothesis testing wasn't possible. F-statistics (1.439) and F-significance (.259) indicate no significant relationship between explanatory variables and academic performance. The multiple regression model explains 5.5% of academic performance variance in Mathematics, with 94.5% attributed to external factors. Parameters' values are standard errors, with coefficients reflecting individual variable relationships. Laboratory, Library, and Class size negatively affect performance insignificantly. Instructional Materials and Sport and Game positively impact Mathematics performance, with Sport and Game being statistically significant. The prediction equation is Y = 41.415 + 0.315(X1) – 0.081(X2) – 0.585(X3) + 1.616(X4) – 0.229(X5) for Students' Academic Performance in Mathematics.

Discussion

This research examined the relationship between school facilities and academic performance among senior secondary school students in Lafia Local Government Area, and Nasarawa State. It found that instructional materials, laboratory facilities, library resources, classroom size, and sports and games have positive effects on students' academic performance. However, while these factors contribute to student success, they alone cannot predict academic performance. Other factors not studied in this research also influence students' academic performance in senior secondary schools in the area. The study tested two hypotheses. Hypothesis one examined the predictive power of instructional materials, laboratory facilities, library resources, classroom size, and sports and games on students' academic performance in English Language. Although these variables collectively accounted for over 11% of the variation in academic performance, they were not individually significant predictors. However, their presence and quality within educational institutions positively contribute to the overall teaching and learning environment. This finding corroborated Bassey et al (2023), Asogwa et al., (2021), Adeyemi (2023) and Akinboboye et al., (2019) submission that instructional materials of all kinds visual and non-visual appeal to the sense organs during teaching and learning.

Hypothesis two assessed the predictive power of the same variables on students' academic performance in Mathematics. Similar to the findings in English Language, while these variables collectively contributed positively to academic performance in Mathematics, they were not individually significant predictors. Nevertheless, the availability and quality of school facilities, including instructional materials, laboratory facilities, library resources, sports and games, and classroom size, play significant roles in enhancing students'

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performance in Mathematics. This result is consistent with the findings of Abidoye (2021), Edom and Douglas (2024) and Omiko (2015) posited that library facilities, laboratories and other school resources are strongest predictors of students' academic achievement.

Although the study revealed that school facilities have a *high impact* on students' academic performance in general, the **multiple regression analysis** showed that **school facilities did not significantly predict performance in English Language and Mathematics specifically**. Several factors may explain this outcome, many of the facilities discussed in this article **laboratories**, **science equipment,** and **sports infrastructure** are more aligned with science or physical education subjects than with language or mathematics. While science subjects benefit greatly from well-equipped laboratories and practical exposure, English and Mathematics require **more cognitive-based, rather than facility-based, instructional support.** For example, proficiency in English often depends more on **reading culture, language exposure, and teacher quality** than on physical infrastructure. The **impact of teaching quality and methods** may outweigh the impact of physical facilities in subjects like English and Mathematics. The study notes the influence of **teacher qualifications** and instructional practices as critical for student performance. According to Asikhia (2010), inexperienced teachers and improper methods greatly affect student outcomes. If the teaching methods in English and Mathematics were inadequate, even excellent facilities would have limited influence. Despite the presence of facilities, **overcrowded classrooms** (reported as 60–75 students per class) might have prevented effective use of available resources in English and Mathematics classes, which typically require **personalized attention and interaction**.

English Language performance is closely tied to **reading habits, vocabulary development**, and **language immersion**, which may not directly benefit from general school facilities unless a library is well-used and maintained. Mathematics, on the other hand, relies on **practice, conceptual clarity**, and **cognitive skills** areas which may not be significantly improved merely by the presence of physical infrastructure. If the facilities available were **not directly tied to English and Mathematics learning needs** such as if there were more sports or science resources than language labs or mathematics teaching aids their presence would have minimal impact. The **practical implications** of the **prediction equations** presented in this study relate to how school administrators, policymakers, and educators can interpret and utilize the regression models to guide **resource allocation, facility improvement**, and **academic planning**. Here's a breakdown of the practical implications for both the English Language and Mathematics models:

Class Size has a **significant positive impact** on English performance ($p = .033$), suggesting that **smaller class sizes** or better-managed student-teacher ratios lead to better outcomes in English. Despite other variables having **no statistically significant impact**, their **positive or negative coefficients** reflect their **direction of influence**: **Instructional Materials** (+0.434) contribute positively, though not significantly implying **well-planned investments** here could be helpful. **Laboratory** and **Library** have negative coefficients (-0.749, -0.123), possibly due to **poor usage**, **maintenance**, or **irrelevance** to English instruction. The equation explains **11.8%** of the variance, so while **useful**, it should not be **solely relied upon** for predicting outcomes. Efforts to improve English performance should **prioritize reducing class size** and **enhancing instructional material usage**, rather than merely increasing lab or library investments **without ensuring their direct relevance** to English teaching. **Sports and Games** had a **statistically significant positive influence** ($p = .022$) suggesting that **active participation in sports** can enhance cognitive function, time management, or stress reduction, indirectly improving Mathematics performance. All other variables were not significant, and some had **unexpected directions**, e.g., **Library** (-0.585) and **Class Size** (-0.229), indicating **possible underutilization** or **poor implementation**. The model only explains **5.5% of the variance**, so its **predictive power is limited**. To improve Mathematics outcomes, schools should **maintain or enhance sports participation**. While other facilities are important, their impact on Mathematics may be **indirect**, and **pedagogical factors** (e.g., teacher quality, curriculum, student engagement) may have **greater influence**. A school administrator may use these equations to **prioritize budget allocation i**nstead of purchasing more laboratory equipment (which negatively predicts English and has minimal effect on Mathematics), the school may choose to **reduce class sizes** or introduce **structured sports programs** for better results.

Conclusion

The study explored the influence of school facilities on the academic performance of senior secondary students in Lafia, Nasarawa State. It found that instructional materials, laboratory facilities, library resources, classroom size, and sports and games all have positive effects on students' academic performance. However, while these factors contribute to student success, they alone cannot predict academic performance. Other factors not studied in this research also influence students' academic performance in senior secondary schools in the area. Future research

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should explore additional variables to better understand the complexities of academic success in secondary education.

Recommendations

Considering the findings, the following recommendations are suggested:

1. School managers should carry out a comprehensive inventory of school facilities to obtain information on the components, policies and procedures of new or existing facility.
2. Utilization, maintenance and improvement of the facilities should be planned to guide against wastages, malfunctioning and total abandonment of school facilities.
3. There is a pressing need for government-funded libraries in secondary schools, furnished with sufficient textbooks and resources, to enhance teaching and learning.
4. Schools should be equipped with quality sports facilities, including basketball courts, volleyball courts, table tennis, and handball facilities, to boost staff productivity and student well-being.
5. State government and association of principals of secondary schools should encourage competitive school sports among secondary school students to enhance grade level in schoolwork.

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