

SCHOOL SPACE PLANT PLANNING AS CORRELATE OF TEACHERS' JOB PERFORMANCE IN POST BASIC SCHOOLS IN ADAMAWA STATE, NIGERIA

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Abstract

The study examined the relationship between school space plant planning and teachers' job performance in Senior Secondary Schools in Adamawa State, Nigeria. The research addressed three key objectives and research questions, each linked to corresponding null hypotheses. Employing a correlational research design, the target population comprised 7,113 principals and teachers in public senior secondary schools throughout Adamawa State, with a study sample of 711 respondents, including 671 teachers and 40 principals selected using proportionate, random, and purposive sampling methods. Data were gathered utilizing two structured questionnaires: the School Space Plant Planning Questionnaire (SSPPQ) and the Teachers Job Performance Questionnaire (TJPQ), both subjected to expert validation and demonstrating strong reliability coefficients of 0.83 and 0.80, respectively, via Cronbach Alpha analysis. Descriptive statistics (mean and standard deviation) were used to answer the research questions, while inferential statistics (simple and multiple regression analysis) were applied to test the hypotheses. Findings indicated that the level of instructional space planning was moderate, with a grand mean of 3.40 and SD of 1.06, and significantly predicted teachers' job performance ($\beta = 0.87$, $t = 11.02$, $p < 0.05$). Administrative space planning was also moderate, with a grand mean of 3.36 and SD of 1.08, and significantly predicted job performance ($\beta = 0.49$, $t = 3.53$, $p < 0.05$). Overall job performance among teachers was moderate (grand mean = 3.42, SD = 1.02), and the combined analysis demonstrated that all plant planning aspects jointly contributed strongly and significantly to teachers' job performance ($R = 0.80$, $F(2,35) = 35.81$, $p < 0.05$). The study concluded that comprehensive school plant planning is essential for optimizing teacher productivity and job satisfaction. It recommended that school management should prioritize effective planning and maintenance of all school plant spaces, especially instructional and convenience spaces, to enhance teachers' performance and educational outcomes in senior secondary schools.

Keywords: School Space Plant Planning, Instructional Space Planning, Administrative Space Planning, and Teachers' Job Performance.

Introduction

Education is universally recognized as a fundamental driver of individual and national development. It serves as the bedrock for societal progress, equipping

individuals with the knowledge, skills, and values necessary for meaningful participation in economic, social, and political life (Lucky & Amadioha, 2025; Umar & Musa, 2022; Adesope, 2021). For

a nation to grow and attain sustainable development, its education system must be robust, inclusive, and well-resourced. Secondary education, in particular, serves as the bridge between basic literacy and higher learning, preparing students with the knowledge and skills necessary for employment, further education, and civic participation. It is within secondary schools that young people begin to align with specific fields of study, thereby positioning themselves for future careers and roles in national development. Education fosters innovation, reduces poverty, and promotes peace and stability by nurturing informed citizens who contribute to nation-building (World Bank, 2024). The World Bank emphasizes that education is a powerful instrument for reducing poverty, improving health, and ensuring equity and inclusion in society (World Bank, 2024).

A school, as an educational institution, is established for the purpose of teaching and learning. It is the formal setting where pupils and students are trained and refined for societal responsibilities. A school is an institution established for teaching and learning, where students are refined and formal education is imparted. Schools are typically categorized as primary, secondary, and tertiary, each playing a unique role in shaping human potential. Ortiz-Ospina et al (2019) described a school as a learning environment designed to foster academic growth under the direction of teachers. Schools are commonly categorized into primary, secondary, and tertiary institutions, with secondary schools playing a crucial role in building foundational academic and vocational competence. According to Obasi (2018), secondary schools in Nigeria are central to nurturing human potentials and capacity development. The Federal Republic of Nigeria (2014) outlines the objectives of secondary

education to include providing higher educational opportunities, fostering unity, developing technical and vocational skills, and inspiring self-improvement and excellence among students.

Teachers play a fundamental role in shaping the quality of education and student outcomes. The core of every educational system, but notably one in Nigeria, is its teachers. As a result, teachers make up a sizable portion of the labour force and are at the forefront of the fight for national development. This may be because teachers play outstanding roles in the growth of the labour force and the accomplishment of national educational objectives in the country. In the light of this, the National Policy on Education stated that teacher's education, training and development shall continue to be given major emphasis in all educational planning and development. More specifically, the policy stated that the goal of teacher education is to create classroom teachers who are highly motivated, diligent, and effective at all levels of our educational system (Federal Republic of Nigeria, FRN, 2013). Consequently, it's important for teachers to participate in professional development to refresh their knowledge and abilities in order to be more efficient in their job performance.

According to Uwannah et al (2019), job performance is the output of a person or a group of people's input that is directed at fulfilling predetermined organizational objectives. Hence, teachers' job performance refers to the effectiveness and quality with which teachers fulfil their roles and responsibilities in the classroom and school setting (Gikunda, 2016). Teachers' job performance often encompasses a range of factors such as high students' classroom engagement, personalised instruction, classroom management, effective use of instructional

strategies and resources that contribute to successful teaching and positive student outcomes in schools (Chukwueze, 2023). However, persistently low students' achievement levels across various subjects and grade levels, high students' dropout, teachers' absenteeism, inadequate lesson planning, poor students' behaviour management are indicators of poor teacher job performance in post-basic schools (Uduak & Daniel, 2019). To ensure effective teaching practices school space plant planning is widely recognized as a critical factor. The provision of adequate teaching materials and learning resources also plays a crucial role in improving performance. When teachers have access to textbooks, teaching aids, laboratory equipment, and digital tools, they are better positioned to deliver effective and engaging lessons. In Nigeria, and more specifically in Adamawa State, several studies have identified factors that hinder teachers' job performance. Among these are poor working conditions, irregular salary payments, lack of recognition for professional efforts, and the absence of adequate support systems (Yamta & Awodoyin, 2025). Many teachers operate in environments that lack basic infrastructure and resources needed for effective teaching.

Based on current realities, the Yamta and Awodoyin (2025) observed some teachers to be doing their professional roles with a lack of rigour. As a result, there are frequent instances of absenteeism, persistent lateness to school, irregular and unofficial movement from duty post, and other types of indiscipline. Some teachers in the study area, where even noticed by the researcher to be on the hunt for better job positions elsewhere. These teachers' poor performances and attitude to work could hinder post-basic schools in the study area from achieving their targeted school goals and objectives. The

consequences of poor job performance can be detrimental to both students and the education system, resulting in uneven learning outcomes, low student motivation, and diminished trust in the education system.

Despite the importance of teachers job performance, teachers in Nigeria face numerous challenges that hinder their performance. Research highlights issues such as inadequate remuneration, poor working conditions, lack of professional development opportunities, insufficient teaching materials, and high workload (Agah & Yakubu, 2024; Nwakaego et al., 2024). These challenges often result in low motivation, absenteeism, high turnover rates, and ultimately, poor job performance. In Adamawa State, for example, teachers report inadequate motivation, insufficient accommodation, and long commutes, all of which negatively impact their effectiveness and satisfaction (Agah & Yakubu, 2024). Teachers' job performance has thus emerged as a major concern, with evidence pointing to suboptimal instructional delivery, poor class control, and low student achievement in several regions, including Adamawa State. Another key factor that influences teachers' job performance is the state of the school plant. This brings to the fore the importance of school plant planning (Obasi, 2019).

School space plant planning refers to the systematic design, organization, and maintenance of physical facilities in schools to support educational activities. It includes the selection of appropriate school sites and the provision of essential spaces such as classrooms, laboratories, libraries, administrative offices, walkways, restrooms, and recreational areas. A well-planned and adequately maintained school plant contributes significantly to a

conducive learning environment. It enhances teacher motivation and job satisfaction by ensuring safety, comfort, and access to necessary teaching resources (Yakubu & Sowunmi, 2017). Effective school plant planning not only supports curriculum implementation but also promotes productivity and well-being for both teachers and students. In essence, a school's physical environment can either support or hinder the delivery of quality education, making school plant planning a critical aspect of educational development.

School space plant planning involves a comprehensive approach to organizing and managing the physical environment of a school in a way that promotes effective teaching and learning (Obasi, 2019). According to the author, each component of the school plant plays a specific role in influencing the performance of teachers, either directly or indirectly. The planning of school facility spaces is a structured approach to choosing a location and designing, constructing, and outfitting a school to foster an effective teaching and learning atmosphere (Ololube, 2022). This process includes organizing instructional areas, administrative sections, traffic pathways, and amenities, as well as the school building, playgrounds, and the essential furniture and equipment needed to achieve educational objectives and address the requirements of students and the community. Key elements include the planning of instructional spaces, administrative areas, circulation pathways, and convenience spaces (Ogundele & Adebayo, 2024; Okon & Effiong, 2023; Ololube, 2022; Okeke & Ibe, 2022; Ogunleye & Adebisi, 2022; Okeke & Eze, 2020; Okeke & Obioma, 2020;). Each plays a distinctive role in enhancing the working environment for educators and, as a result, their job effectiveness. Instructional space planning is central to

the teaching-learning process, as it deals with classrooms, laboratories, libraries, and workshops where direct instruction takes place (Okeke & Eze, 2020).

Instructional space plant planning is the process of determining the ideal location, structural design, and facilities for learning spaces like classrooms, libraries, and workshops to support effective teaching and learning. It involves considering factors such as space per student, lighting, ventilation, furniture, and overall safety and comfort to create an environment that fosters student engagement, resource access, and academic success (Okeke & Eze, 2020). When these spaces are properly designed and equipped—with adequate lighting, ventilation, furniture, and teaching aids—they provide a comfortable and stimulating environment that supports both teachers and students. Teachers working in well-planned instructional spaces are more likely to deliver lessons effectively, maintain classroom discipline, and engage students actively. On the contrary, overcrowded or poorly ventilated classrooms, and laboratories that lack necessary equipment, limit teachers' ability to implement the curriculum effectively. Obasi (2019) notes that instructional spaces that are adequately planned and resourced have a strong positive impact on both student achievement and teacher effectiveness, highlighting the centrality of this component in school plant planning. Research by Takwate (2018) and Obasi and Opene (2019) shows that well-planned administrative spaces contribute to better management and positively influence both teacher productivity and student outcomes.

Administrative space plant planning in secondary schools involves designing, locating, and structuring areas for non-instructional functions like offices for principals, staff, and counselors, as well as

facilities like staff rooms and health clinics (Ogundele & Adebayo, 2024). The goal is to create a functional, accessible, and pleasant environment that supports school management, improves staff efficiency, and provides a welcoming atmosphere for students, teachers, and the public, thereby enhancing overall school effectiveness. Administrative space plant planning is another critical element that affects the overall efficiency and morale of teaching staff. Administrative spaces include the principal's office, staff rooms, conference halls, and offices for support staff. These spaces are essential for the coordination of school operations, staff meetings, and strategic planning (Okon & Effiong, 2023). When these areas are properly arranged and functional, they support a smooth flow of communication, encourage collaboration among teachers, and enable effective school leadership. A well-organized staff room, for instance, serves not just as a resting place but also as a hub for professional interaction and peer support. Teachers are more likely to feel respected and professionally supported when their work environment includes clean, accessible, and functional administrative spaces.

Despite Adamawa State government's huge investment (Adamawa Approves N17.1bn for Mega Science Schools, Infrastructure Projects) in public education, parents, including principals of public secondary schools tend to prefer sending their wards to private secondary schools (Daily Trust, 26th August, 2024). Despite the investments made in providing various school infrastructural facilities, there is a need to comprehensively examine whether these investments have a discernible impact on the performance of teachers in the classroom, the administrative efficiency of school management, and the overall educational outcomes for students. Also, a lack of

empirical evidence on this critical correlation hinders the State's ability to strategically allocate resources, and improve the quality of education. Based on current realities, the researcher observed some teachers to be doing their professional roles with a lack of rigour. As a result, there are frequent instances of absenteeism, continuous lateness to school, irregular and unofficial movement from duty post, and other types of indiscipline (like sitting under trees, using nearby bushes as restrooms etc). Some teachers in the study area, where even noticed by the researcher to be on the hunt for better job positions elsewhere. These teachers' poor performances and attitude to work could hinder secondary schools in the study area from achieving their targeted school goals and objectives. The consequences of poor job performance can be detrimental to both students and the education system, resulting in uneven learning outcomes, low student motivation, and diminished trust in the education system.

Against this backdrop, this study is deemed necessary to examine the critical role that various component of school plant planning play in enhancing teachers' job performance. Given the direct and indirect impact of instructional, administrative, circulation, and convenience spaces on the efficiency, motivation, and overall job performance of secondary school teachers, it becomes imperative to assess how the physical environment of schools supports or hinders the achievement of educational objectives. In the context of Nigeria, particularly in Adamawa State where infrastructural inadequacies are common, this study seeks to provide empirical insights that can guide policy reforms and infrastructural investments aimed at improving the teaching-learning environment. To address

this issue, a thorough investigation is required to uncover the nature and strength of school space plant planning as correlate of teachers' job performance in Senior Secondary Schools in Adamawa State, Nigeria.

Purpose of the Study

This study investigated school space plant planning as correlate of teachers' job performance in Senior Secondary Schools in Adamawa State, Nigeria. Specifically, the study sought to examine the correlation between:

1. Instructional space planning as correlate of teachers' job performance in in Senior Secondary Schools in Adamawa State, Nigeria.
2. Administrative space planning as correlate of teachers' job performance in in Senior Secondary Schools in Adamawa State, Nigeria.
3. School Plant Planning (Instructional space planning, Administrative space planning) as correlates of teachers' job performance in in Senior Secondary Schools in Adamawa State, Nigeria.

Research Questions

The following research questions were raised to guide the study:

1. What is the level of instructional space planning in Senior Secondary Schools in Adamawa State, Nigeria?
2. What is the level of administrative space planning in Senior Secondary Schools in Adamawa State, Nigeria?
3. What is the level of Teachers' Job Performance in Senior Secondary Schools in Adamawa State, Nigeria?
- 4.

Hypotheses

The following hypotheses were formulated to guide the study and were tested at 0.05 Alpha level of significance:

- H₀₁:** There is no significant correlation between instructional space planning and teachers' job performance in Senior Secondary Schools in Adamawa State, Nigeria.
- H₀₂:** There is no significant correlation between administrative space planning and teachers' job performance in Senior Secondary Schools in Adamawa State, Nigeria.
- H₀₃:** There is no significant correlation between school plant planning (instructional space planning, administrative space planning) and teachers' job performance in Senior Secondary Schools in Adamawa State, Nigeria.

Methodology

Correlational research design was adopted for this study. The study was carried out in Adamawa State, Nigeria. The population of the study consists of 7,113 teachers and principals from Post Basic Schools in Adamawa State (Adamawa State Post Primary School Management Board, 2024). The sample size consists of 711 participants, including 671 teachers and 40 principals. The selection of 10% is justified by Creswell and Creswell (2018), who noted that this percentage is adequate for any population of 5000 or more. A multi-stage sampling procedure was employed for this research. The instruments for data collection for this study were two adapted instruments from Egberé (2015) and Takwate (2018). The items are structured on a five-point modified Likert rating scale of VHL=Very

High Level (5), HL=High Level (4), ML=Moderate Level (3), LL=Low Level (2) and VLL=Very Low Level (1).

To ensure the validity of the instruments “School Space Plant Planning Questionnaire (SSPPQ) and Teachers’ Job Performance Questionnaire (TJPQ)” were submitted to three experts from the Department of Education Foundations, Faculty of Education, Modibbo Adama University, Yola for face and construct validity. SSPPQ and TJPQ yielded a Content Validity Index Coefficients of 0.78 and 0.80 respectively. In order to ascertain the reliability of the instruments, thirty (30) copies of questionnaire were given to the selected respondents to answer and were collected back by the researcher the same day of visit to each of the three public secondary schools in Yola North Local Government Area. Data were collated and analyzed for reliability using Cronbach Alpha Statistic. Specifically, Test of Internal Consistency was used in checking the internal consistency of items of the instruments. The overall co-efficient of each component of SSPPQ yielded 0.83, while TJPQ, yielded 0.80. The direct delivery approach was used in administering the questionnaire copies.

The data collected were analyzed using SPSS version 25.

The descriptive statistics of mean and standard deviation were used to answer the research questions. The decision rule for answering the research questions was based on the real limit value of; Very High Level (VHL) with 4.5-5.00 real limits, High Level (HL) with 3.50-4.49 real limits, Moderate Level (ML) with 2.50-3.49 real limit, Low Level (LL) with 1.50-2.49 real limit, Very Low Level; (VLL) with 0.00-1.49 real limit. The criterion for hypothesis testing was to reject the null hypothesis if the P-value is lower than the 0.05 significance level, indicating a relationship between the two correlated variables. Conversely, if the P-value exceeds the 0.05 significance level, the null hypothesis was not rejected.

Results

Three research questions were raised and answered using descriptive statistics of mean and standard deviation, while the hypotheses were tested at 0.05 level of significance using regression analysis of (simple linear and multiple regression analyses).

Research Question 1: What is the level of instructional space planning in Senior Secondary Schools in Adamawa State, Nigeria?

Table 1: Mean and Standard Deviation of Level of Instructional Space Planning in Senior Secondary Schools

S/N	Item (n = 671)	Mean	S. D	Remark
1	Classrooms are adequately equipped for effective teaching and learning.	3.66	0.91	HL
2	Ensuring that all students have equal access to quality learning space (resources).	3.46	1.04	ML
3	Laboratories are available and accessible for practical lessons.	3.17	1.11	ML

4	Libraries are well-stocked with variety of textbooks for teachers use.	3.53	1.21	HL
5	ICT rooms are adequately provided.	3.31	1.10	ML
6	Incorporating interdisciplinary curricular (i.e Designing spaces that support the integration of different subjects).	3.29	1.00	ML
7	Ventilation/lighting in classrooms support effective teaching-learning.	3.38	1.07	ML
8	Instructional spaces are free from acoustics/noise.	3.43	1.03	ML
Gran Mean		3.40	1.06	ML

From Table 1, item means ranged from 3.17 to 3.66, with SDs between 0.91 and 1.21, showing moderate variability in responses. Classrooms and libraries were rated high (HL), while other items such as laboratories, ICT rooms, and

interdisciplinary spaces were moderate (ML). The grand mean of 3.40 (SD = 1.06) indicates an overall moderate level of instructional space planning in the senior secondary schools.

Research Question 2: What is the level of administrative space planning in Senior Secondary Schools in Adamawa State, Nigeria?

Table 2: Mean and Standard Deviation of Level of Administrative Space Planning in Senior Secondary Schools

S/N	Item (n = 671)	Mean	S. D	Remark
9	Adoptable layouts that allow for easy configuring future growth (i.e spaces must be able to adapt to changing requirements as the school business evolves).	3.68	1.03	HL
10	Teachers have access to functional offices or staff rooms.	3.66	1.12	HL
11	Administrative offices are equipped with essential working tools (e.g., computers, printers).	3.49	1.15	ML
12	Confidentiality and privacy are maintained in administrative offices.	3.28	1.01	ML
13	The school's record keeping system is well organized for enhanced documentation of administrative files.	3.19	1.01	ML
14	Designing dedicated areas for collaboration social interaction that improve teamwork (these spaces include meeting rooms, common lounges and break areas).	3.15	1.13	ML
15	Ensuring furniture/workspaces are ergonomically sound/accessible by all employees (e.g providing adjustable chaired, comfortable desk etc).	3.23	1.06	ML

16	The school provides separate offices for different administrative roles (e.g., vice principals, counselors).	3.17	1.11	ML
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Gran Mean		3.36	1.08	ML
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As presented in Table 2, item means ranged from 3.15 to 3.68, with SDs between 1.01 and 1.15. Teachers' access to functional offices and adaptable layouts were rated high (HL), while items such as record-keeping, privacy, ergonomic

furniture, and role-based offices were moderate (ML). The grand mean of 3.36 (SD = 1.08) suggests an overall moderate level of administrative space planning in the schools.

Research Question 3: What is the level of Teachers' Job Performance in Senior Secondary Schools in Adamawa State, Nigeria?

Table 3: Mean and Standard Deviation of Level of Teachers' Job Performance in Senior Secondary Schools

S/N	Item (n = 40)	Mean	S. D	Remark
1	I consistently prepare detailed lesson plans before delivering my lessons.	3.63	0.98	ML
2	I effectively utilize instructional resources to enhance teaching.	3.75	0.81	ML
3	I maintain punctuality in attending classes.	3.80	0.99	HL
4	I ensure that students actively participate during lessons.	3.80	0.94	ML
5	I complete the syllabus within the stipulated time frame.	3.33	1.12	ML
6	I regularly assess students' understanding through assessments.	3.60	0.81	ML
7	I provide constructive feedback to students to improve their learning outcomes.	3.08	1.12	ML
8	I demonstrate professionalism in handling classroom management challenges.	2.85	1.12	ML
9	I collaborate with colleagues to improve instructional practices.	3.18	1.11	ML
10	I actively participate in co-curricular school activities.	3.23	1.17	HL
	Gran Mean	3.42	1.02	ML

As shown in Table 3, item means ranged from 2.85 to 3.80, with SDs between 0.81 and 1.17. Teachers performed well in maintaining punctuality and co-curricular participation (HL), while preparation of

lesson plans, use of instructional resources, student participation, assessment, feedback, professionalism, and collaboration were mostly moderate (ML). The grand mean of 3.42 (SD = 1.02)

reflects an overall moderate level of teachers' job performance in the schools.

Hypotheses Testing

The hypotheses were tested using simple linear and multiple-regression analyses at 0.05 Alpha level of significance:

H₀₁: There is no significant correlation between instructional space planning and teachers' job performance in Senior Secondary Schools in Adamawa State, Nigeria.

Table 4a: ANOVA of Correlation between Instructional Space Planning and Teachers' Job Performance in Senior Secondary Schools

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	10.885	1	10.885	121.503	.000 ^b
	Residual	3.404	38	.090		
	Total	14.290	39			

a. Dependent Variable: Teachers' Job Performance

b. Predictors: (Constant), Instructional Space Planning

Table 4a shows that instructional space planning significantly correlates with teachers' job performance, $F(1, 38) = 121.503$, $p < 0.05$. This indicates that the model is statistically significant, and instructional space planning is a reliable predictor of teachers' job performance.

Table 4b: Model Summary of Correlation between Instructional Space Planning and Teachers' Job Performance in Senior Secondary Schools

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
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1	.873 ^a	.762	.755	.29931
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a. Predictors: (Constant), Instructional Space Planning

Table 4b indicates a strong positive correlation ($R = 0.873$) between instructional space planning and teachers' job performance. The R^2 value of 0.762 shows that 76.2% of the variance in

teachers' job performance is explained by instructional space planning. The standard error of 0.29931 demonstrates that the model predicts teachers' job performance with reasonable accuracy.

Table 4c: Coefficient of Beta

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.718	.250		2.875	.007
	Instructional Space Planning	.848	.077	.873	11.023	.000

a. Dependent Variable: Teachers' Job Performance

Table 4c shows a significant positive effect of instructional space planning on teachers' job performance ($\beta = 0.873$, $t = 11.023$, $p < 0.05$). The unstandardized coefficient $B = 0.848$ indicates that for

every unit increase in instructional space planning, teachers' job performance increases by 0.848 units, highlighting the critical role of well-planned instructional spaces.

H₀₂: There is no significant correlation between administrative space planning and teachers' job performance in Senior Secondary Schools in Adamawa State, Nigeria.

Table 5a: ANOVA of Correlation between Administrative Space Planning and Teachers' Job Performance in Senior Secondary Schools

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.529	1	3.529	12.463	.001 ^b
	Residual	10.761	38	.283		
	Total	14.290	39			

a. Dependent Variable: Teachers' Job Performance

b. Predictors: (Constant), Administrative Space Planning

Table 5a shows a significant correlation between administrative space planning and teachers' job performance, $F(1, 38) = 12.463$, $p < 0.05$, suggesting the model is statistically significant.

Table 5b: Model Summary of Correlation between Administrative Space Planning and Teachers' Job Performance in Senior Secondary Schools

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.497 ^a	.247	.227	.53214

a. Predictors: (Constant), Administrative Space Planning

Table 5b shows a moderate positive correlation ($R = 0.497$) between administrative space planning and teachers' job performance. The R^2 value of 0.247 indicates that 24.7% of the variance in teachers' job performance is accounted for by administrative space planning. The standard error of 0.53214 shows acceptable predictive accuracy.

Table 5c: Coefficient of Beta

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	2.156	.369		5.850	.000
	Administrative Space Planning	.413	.117	.497	3.530	.001

a. Dependent Variable: Teachers' Job Performance

Table 5c indicates that administrative space planning significantly predicts teachers' job performance ($\beta = 0.497$, $t = 3.530$, $p < 0.05$). The unstandardized coefficient $B = 0.413$ implies that improvements in administrative space planning moderately enhance teachers' job performance.

H₀₃: There is no significant correlation between school plant planning (instructional space planning, administrative space planning) and teachers' job performance in Senior Secondary Schools in Adamawa State, Nigeria.

Table 6a: ANOVA of Correlation between School Plant Planning and Teachers' Job Performance in Senior Secondary Schools

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	11.484	4	2.871	35.807	.000 ^b
	Residual	2.806	35	.080		
	Total	14.290	39			

a. Dependent Variable: Teachers' Job Performance

b. Predictors: (Constant), Space for Convenience, Circulation Space Planning, Instructional Space Planning, Administrative Space Planning

Table 6a demonstrates that the combined school plant planning (instructional, administrative, circulation, and convenience spaces) significantly predicts

teachers' job performance, $F(4, 35) = 35.807$, $p < 0.05$, confirming that together these components contribute to performance.

Table 6b: Model Summary of Correlation between School Plant Planning and Teachers' Job Performance in Senior Secondary Schools

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.896 ^a	.804	.781	.28316

a. Predictors: (Constant), Space for Convenience, Circulation Space Planning, Instructional Space Planning, Administrative Space Planning

Table 6b shows a very strong correlation ($R = 0.896$) between combined school plant planning and teachers' job performance. The R^2 value of 0.804 indicates that 80.4% of the variance in

teachers' job performance is explained by the combined planning of school facilities, with standard error 0.28316 reflecting high predictive accuracy.

Table 6c: Coefficient of Beta

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.282	.332		.849	.401
	Instructional Planning	Space .854	.099	.878	8.619	.000
	Administrative Planning	Space -.069	.091	-.083	-.752	.457

a. Dependent Variable: Teachers' Job Performance

Table 6c shows that among the components, instructional space planning ($\beta = 0.878$, $t = 8.619$, $p < 0.05$) and space for convenience ($\beta = 0.197$, $t = 2.486$, $p < 0.05$) significantly predict teachers' job performance. Administrative space

planning ($\beta = -0.083$) and circulation space planning ($\beta = -0.016$) were not significant when combined, suggesting that instructional spaces and convenience areas are the most critical for enhancing teachers' effectiveness.

Summary of Major Findings

The following are the major findings of the study:

1. The finding of the study reveals that the level of instructional space planning in senior secondary schools in Adamawa State, Nigeria, is generally moderate, with a grand mean of 3.40 and standard deviation of 1.06. Instructional space planning was found to significantly predict teachers' job performance, ($\beta = 0.873$, $t = 11.023$, $p < 0.05$).
2. The finding also reveals that the level of administrative space planning is moderate, with a grand mean of 3.36 and standard deviation of 1.08. Administrative space planning was shown to significantly predict teachers' job performance, ($\beta = 0.497$, $t = 3.530$, $p < 0.05$).

3. Additionally, the study reveals that teachers' job performance in senior secondary schools is generally moderate, with a grand mean of 3.42 and standard deviation of 1.02. The combined school plant planning, including instructional and administrative significantly predicts teachers' job performance, ($R^2 = 0.804$, $F(2, 35) = 35.807$, $p < 0.05$).

Discussion of Findings

This section discusses the findings of the study on school space plant planning in senior secondary schools in Adamawa State, Nigeria, highlighting how each aspect of the school environment predicts teachers' job performance and comparing the results with previous studies.

The finding of the study reveals that the level of instructional space planning in senior secondary schools in Adamawa State, Nigeria, is generally moderate. Instructional space planning was found to

significantly predict teachers' job performance. This suggests that while schools provide and organize classrooms, laboratories, libraries, and ICT rooms, the planning is not optimal, which may limit teaching efficiency and lesson delivery. Nevertheless, the significant prediction indicates that even moderate planning positively influences teacher performance by facilitating classroom management and instructional activities. This finding agrees with previous studies. Onabe (2025) reported that recreational and instructional space planning significantly influences teacher performance in Delta State. Similarly, Ahmed and Dantani (2024) noted that effective utilization of instructional spaces strongly correlates with teacher job satisfaction and lesson punctuality in Northern Nigeria. Umar and Musa (2022) also found a moderate positive correlation between instructional space quality and teacher effectiveness, highlighting the importance of even moderate planning for enhancing teacher productivity.

The study also reveals that the level of administrative space planning is moderate, and administrative space planning significantly predicts teachers' job performance. This implies that principals provide offices and administrative areas to support staff functions, but space allocation, accessibility, and adequacy may be limited. The significant effect suggests that proper administrative spaces enable teachers to plan lessons, maintain records, and collaborate effectively, which enhances job performance. This aligns with prior research. Ogundele and Adebayo (2024) reported that administrative congestion negatively impacts teacher discipline and collaboration, while Garba and Aliyu (2022) found that accessible, furnished administrative offices enhance lesson preparation and delivery. Bello and Lawal

(2021) also emphasized that equitable and functional administrative spaces positively influence teachers' job commitment, supporting the current study's finding.

The study also reveals that teachers' job performance in senior secondary schools is generally moderate, and the combined school plant planning including; instructional, administrative, circulation, and convenience spaces significantly predicts teachers' job performance. This implies that while individual components of school facilities are at varying levels of adequacy, their collective impact has a meaningful influence on teacher effectiveness. Proper planning of instructional spaces ensures effective lesson delivery, administrative spaces support record-keeping and planning, circulation spaces facilitate smooth mobility, and convenience spaces sustain teacher well-being. The synergy among these spaces creates an environment conducive to moderate yet significant improvement in teacher performance. This finding corroborates earlier research that emphasizes the integral role of comprehensive school plant planning. For example, Adeleke and Oyewole (2023) found a significant relationship between school plant including instructional, administrative, and convenience spaces and teacher productivity in Ekiti State. Similarly, Ibrahim and Yusuf (2023) highlighted that inadequate instructional space reduces teaching efficiency, while Usman and Musa (2024) noted the positive effect of organized circulation spaces on instructional time management. Collectively, these studies reinforce the present finding that holistic planning of all school facilities is crucial for enhancing teacher performance.

In conclusion, the study establishes that school space plant planning in senior secondary schools comprising instructional

and administrative has a significant positive effect on teachers' job performance in Adamawa State. While some aspects, such as instructional and administrative, are moderately planned, convenience facilities are highly adequate. The combined planning of all spaces creates a supportive environment that enhances teacher effectiveness, satisfaction, and productivity. These findings generally agree with previous studies across Nigeria and other contexts, underscoring the critical importance of holistic school infrastructure development for improving teaching and learning outcomes. The study highlights the need for continuous investment and strategic planning to optimize all components of school facilities, ensuring that teachers can perform their roles effectively and that students benefit from improved instructional delivery.

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