

SCHOOL ENVIRONMENT AND TEACHERS' PRODUCTIVITY IN PUBLIC SENIOR SECONDARY SCHOOLS IN KOGI STATE

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Abstract

This study examined the relationship between school environment and teachers' productivity in public secondary schools in Kogi State, Nigeria, within the context of recent educational interventions. The study adopted a correlational research design. The population comprised 3,392 teachers, from which a multi-stage sampling technique selected a sample of 358. Data were collected using a structured questionnaire titled School Environment and Teachers' Productivity Questionnaire (SETPQ), with a reliability coefficient of 0.78 determined using Cronbach's alpha. The data were analysed using the Pearson Product-Moment Correlation Coefficient at a 0.05 significance level. The findings revealed a significant positive relationship between the physical school environment and teachers' productivity ($r = 0.62, p < 0.05$) as well as between the school support environment and teachers' productivity ($r = 0.68, p < 0.05$). Overall school environment showed a strong positive relationship with teachers' productivity ($r = 0.72, p < 0.05$). The study concluded that both physical and institutional support conditions are critical determinants of teachers' productivity, with their combined effect exerting the greatest influence. It was recommended that educational stakeholders adopt a holistic approach to improving school environments by integrating infrastructural development with strong institutional support systems to enhance teachers' effectiveness.

Keywords: School environment, Physical environment, School support environment, Teachers' productivity, Secondary education.

Introduction

Education remains a fundamental instrument for national development, with secondary education playing a critical role in preparing individuals for higher education and productive participation in society. Within this framework, teachers are central to achieving educational goals, as their effectiveness directly influences students' learning outcomes. This effectiveness is often referred to as teachers' productivity, which encompasses key professional responsibilities, including lesson delivery, classroom management, student engagement, and assessment practices. The extent to which teachers perform these roles effectively is influenced by several factors, among which the school environment is particularly significant. The school environment refers to the overall conditions within which teaching and learning take place, including both physical facilities and institutional support systems that shape teachers' work experiences. It includes infrastructural elements such as classrooms, furniture, ventilation, and sanitation, as well as support mechanisms such as the availability of instructional materials, administrative backing, and policy provisions. As noted by Gbesoevi et al. (2023), a conducive school environment enhances teachers' morale, efficiency, and commitment, thereby

promoting improved instructional delivery and overall performance. Conversely, a deficient environment may constrain teachers' effectiveness and reduce their level of productivity (Ossai & Okokoyo, 2024).

In recent years, the Kogi State Government has intensified efforts to improve the school environment through a range of educational interventions targeting physical infrastructure, learning resources, teacher availability, and institutional support. These interventions are particularly relevant to public secondary schools, where the quality of the school environment constitutes an important condition for effective teaching and learning. One of the major recent interventions is the Adolescent Girls Initiative for Learning and Empowerment (AGILE) Project, through which the state commenced the renovation of 728 government-owned public schools. The intervention is intended to upgrade ageing school infrastructure and provide safer, more inclusive, and more conducive spaces for teaching and learning. In addition to general renovation, Kogi State has continued to develop modern model schools equipped with facilities such as standard classrooms, libraries, science laboratories, ICT centres, computer-based testing facilities, sports facilities, water, sanitation and hygiene systems, and secure school environments (Umar et al., 2024). These physical provisions directly correspond to the physical condition dimension of the school environment examined in this study, as adequate classrooms, functional laboratories, ICT facilities, sanitation, and safe surroundings provide teachers with the physical conditions required to plan and deliver instruction effectively.

Additionally, beyond physical infrastructure, the state has implemented interventions aimed at strengthening institutional support for schools and reducing barriers to students' participation. The free education policy and the Kogi State Free Examination Registration Law provide for government payment of internal and external examination fees for pupils and students in public schools. In the 2024/2025 academic session, for instance, the government approved funds for the registration of 18,734 public secondary school students for the West African Senior School Certificate Examination (WASSCE). By reducing the financial burden associated with examination participation, this intervention supports school access and continuity and may also reduce administrative and instructional pressures associated with students' inability to participate in examinations (Ezema et al., 2023).

According to Umoru et al. (2025), the state has also introduced measures directed at improving the availability of learning resources and strengthening instructional support. Recent education plans provide for the procurement and distribution of textbooks, teachers' guides and supplementary learning materials, alongside ICT-based teaching resources such as tablets, interactive boards, projectors and other digital devices. The state has also adopted policies intended to make textbooks more accessible and reusable among students rather than restricting their use to individual learners. Such interventions are relevant to the institutional-support dimension of the school environment because they provide teachers with instructional resources and institutional backing needed for effective lesson preparation, lesson delivery, classroom management and student assessment.

Teacher availability and professional support have also received attention under recent education reforms. The Kogi State Government (2026) reported efforts to recruit additional teachers and proposed deploying National Youth Service Corps (NYSC) members with educational backgrounds to public schools in response to teacher shortages. The state has further aligned its education programme with initiatives that emphasise teacher training, data-driven monitoring, skill acquisition and improved educational service delivery. These measures constitute another aspect of institutional support because the availability of adequate teaching personnel, professional development opportunities, and monitoring mechanisms can provide teachers with the organisational conditions necessary to perform their duties effectively.

Collectively, these interventions demonstrate that Kogi State has made substantial efforts to improve both the physical and institutional dimensions of the school environment. However,

the existence of these interventions does not necessarily establish that improved school conditions automatically translate into higher teachers' productivity. As noted by Umoru et al. (2025), the provision of renovated classrooms, laboratories, ICT facilities, instructional materials, examination support, additional teachers, and other institutional resources may create more favourable conditions for teachers, but the extent to which such conditions are associated with teachers' actual productivity remains an empirical question. Indeed, variations may persist in teachers' instructional effectiveness across public secondary schools despite the implementation of educational interventions. While previous studies have examined school environment and teachers' productivity, many have either treated the school environment broadly or have not adequately accounted for the specific physical and institutional interventions introduced in this study. This creates a need for an empirical investigation of how the physical conditions and institutional support systems within the school environment are associated with teachers' productivity in public secondary schools in Kogi State.

Although these interventions demonstrate sustained efforts to improve educational conditions in Kogi State, their implementation provides the broader policy context within which the present study examines the school environment. The study does not evaluate the interventions themselves; rather, it focuses on the physical school environment, school support environment, and their relationship with teachers' productivity. Thus, the interventions provide the contextual basis for understanding the current educational environment in Kogi State, while the empirical focus of the study remains on the extent to which the identified dimensions of the school environment are associated with teachers' productivity in public secondary schools.

This study is anchored in Ecological Systems Theory, which posits that human behaviour and performance are shaped by interactions between individuals and the multiple environmental systems within which they function (Bronfenbrenner, 1979). From this perspective, the school constitutes an important immediate environment in which teachers interact with physical facilities, institutional structures, colleagues, administrators, and other contextual factors that shape their work experiences and professional performance. Recent empirical evidence from Nigeria supports this perspective. For instance, Akinnubi et al. (2024) found that the school constitutes a critical environment in which various factors interact to shape teacher effectiveness. In the context of the present study, the physical school environment, comprising infrastructure, classrooms, facilities, and other material conditions, and the school support environment, comprising institutional policies, resource provision, and other forms of organisational support, represent important aspects of the immediate environment within which teachers perform their professional responsibilities. The theory therefore provides a basis for understanding how variations in these environmental conditions may be associated with differences in teachers' productivity. Favourable physical and institutional conditions may provide teachers with supportive and functional settings for carrying out their duties, whereas inadequate conditions may constrain their capacity to perform effectively. Empirical evidence further indicates that favourable school conditions are associated with effective instructional delivery, classroom management, and teacher commitment, while unfavourable conditions may hinder teachers' productivity (Gbesoevi et al., 2023; Ossai & Okokoyo, 2024). Accordingly, school environment in this study refers to the conditions within which teaching and learning take place, which include the physical environment and school support environment that constitute the conditions of teachers' work. The school environment is therefore examined in this study through two key dimensions: physical environment and school support environment.

Physical School Environment: The physical school environment refers to the tangible conditions and facilities within the school that provide the setting for teaching and learning. This includes classrooms, furniture, ventilation, lighting, sanitation facilities, and other infrastructure that support teachers' comfort, safety, and ability to carry out their instructional

responsibilities. The adequacy and condition of these facilities can shape the quality of the teaching environment, while inadequate infrastructure and overcrowding may create challenges for effective instructional delivery and classroom management (Oni & Odunlami, 2025).

School Support Environment: The school support environment refers to the institutional conditions and provisions that help teachers in carrying out their professional responsibilities. It includes the availability of instructional materials, administrative support, resource provision, and relevant educational policies and programmes. Such forms of support can provide teachers with the resources and organisational conditions required for effective instruction and may contribute to their efficiency, commitment, and productivity (Umar et al., 2024). Teachers' productivity refers to the extent to which teachers effectively and efficiently perform the professional tasks required to achieve educational objectives. In this study, it encompasses teachers' performance in areas such as lesson preparation and delivery, classroom management, record keeping, and student assessment. The extent to which teachers perform these responsibilities may be related to the conditions within which they work, as supportive school environments can provide conditions conducive to effective instructional practice (Ossai & Okokoyo, 2024).

Statement of the Problem

Teachers' productivity is central to the realisation of educational goals in public secondary schools, as it directly influences the quality of instruction and students' academic outcomes. As a result, education stakeholders have worked to improve school conditions to increase teacher effectiveness. In Kogi State, recent interventions such as infrastructural upgrades and educational support programmes have been introduced to improve the learning environment in public secondary schools. Despite these interventions, concerns remain regarding specific aspects of teachers' productivity in public secondary schools in Kogi State. These concerns include variations in the adequacy of lesson preparation, effectiveness of lesson delivery, classroom management, maintenance of instructional records, and assessment of students' learning. In some schools, teachers may also experience difficulties in completing the prescribed curriculum within the expected period and in integrating available instructional resources and technologies into classroom practice. Such concerns are important because teachers' productivity extends beyond their physical presence in school to include the effective performance of core instructional responsibilities. Reports from school supervision exercises and classroom observations have indicated variations in teachers' instructional practices and curriculum implementation across schools (Eziamaka, 2024). The persistence of these concerns, despite ongoing interventions aimed at improving school facilities and institutional support, raises questions about whether improvements in the school environment are adequately associated with teachers' productivity in public secondary schools in Kogi State.

Objectives of the Study

The study seeks to:

1. determine the relationship between the physical school environment and teachers' productivity in public secondary schools in Kogi State;
2. examine the relationship between the school support environment and teachers' productivity in public secondary schools in Kogi State;
3. determine the relationship between the overall school environment and teachers' productivity in public secondary schools in Kogi State.

Research Questions

The following research questions guide the study:

1. What is the relationship between the physical school environment and teachers' productivity in public secondary schools in Kogi State?
2. What is the relationship between the school support environment and teachers' productivity in public secondary schools in Kogi State?
3. What is the relationship between the overall school environment and teachers' productivity in public secondary schools in Kogi State?

Hypotheses

The following null hypotheses are formulated and tested at the 0.05 level of significance:

- H₀₁: There is no significant relationship between the physical school environment and teachers' productivity in public secondary schools in Kogi State.
- H₀₂: There is no significant relationship between school support environment and teachers' productivity in public secondary schools in Kogi State.
- H₀₃: There is no significant relationship between overall school environment and teachers' productivity in public secondary schools in Kogi State.

Methodology

This study adopts a correlational research design, which is appropriate because it allows for the examination of the degree and direction of association among variables as they naturally occur. The population consists of all teachers in public secondary schools in Kogi State. The estimated number of teachers is 3,392 (Federal Ministry of Education [FME], 2022). A multistage sampling technique was used for this study. First, the state was stratified into its three senatorial zones, Kogi East, Central, and West, using stratified sampling to ensure adequate geographical representation. From each stratum, a proportionate number of public secondary schools was then selected through simple random sampling. Finally, teachers were drawn from the sampled schools using simple random sampling. The sample size was calculated using Taro Yamane's formula, yielding 358 teachers for the study. The study used a structured questionnaire titled the "School Environment and Teachers' Productivity Questionnaire (SETPQ)". The instrument was structured on a 4-point Likert scale with response options ranging from Strongly Agree (SA) rated 4, Agree (A) rated 3, Disagree (D) rated 2, and Strongly Disagree (SD) rated 1. The questionnaire measured three variables: the physical school environment, which consisted of conditions relating to classrooms, facilities, and infrastructure; the school support environment, which assessed the availability of instructional resources and the adequacy of policy support; and teachers' productivity, which examined dimensions of lesson delivery, classroom management, and student assessment. The reliability coefficient was established at 0.78 using Cronbach's alpha. The data collected were analysed using descriptive and inferential statistics. Research questions were answered using the Pearson product-moment correlation coefficient (r), while the corresponding hypotheses were tested at a 0.05 level of significance.

Results

Research Question One: What is the relationship between the physical school environment and teachers' productivity in public secondary schools in Kogi State?

Hypothesis 1: There is no significant relationship between the physical school environment and teachers' productivity in public secondary schools in Kogi State.

Table 1: Correlation Between Physical School Environment and Teachers' Productivity

Variables	N	Mean	SD	r	p-value	Decision
Physical School Environment	358	3.08	0.76			
Teachers' Productivity	358	3.15	0.71	0.62	0.000	Significant

Table 1 shows the analysis of the relationship between the physical school environment and teachers' productivity. The results revealed a moderate positive relationship between the physical school environment and teachers' productivity ($r = 0.62$, $p < 0.05$). This indicates that improvements in physical school conditions, such as classroom space, furniture, lighting, ventilation, and maintenance, are associated with increased levels of teachers' productivity. Since the p-value (0.000) is less than the 0.05 level of significance, the null hypothesis is rejected. This implies that there is a statistically significant relationship between the physical school environment and teachers' productivity in public secondary schools in Kogi State.

Research Question Two: What is the relationship between the school support environment and teachers' productivity in public secondary schools in Kogi State?

Hypothesis 2: What is the relationship between the school support environment and teachers' productivity in public secondary schools in Kogi State?

Table 2: Correlation Between School Support Environment and Teachers' Productivity

Variables	N	Mean	SD	r	p-value	Decision
School Support Environment	358	3.12	0.73			
Teachers' Productivity	358	3.15	0.71	0.68	0.000	Significant

Table 2 shows a strong positive relationship between school support environment and teachers' productivity ($r = 0.68$, $p < 0.05$). This finding indicates that the availability of instructional materials, administrative support, and supportive school policies significantly enhances teachers' effectiveness. Teachers who receive adequate institutional support are more likely to demonstrate higher levels of commitment, improved instructional delivery, and better classroom management. Given that the p-value (0.000) is less than the 0.05 significance level, the null hypothesis is rejected. Therefore, there is a statistically significant relationship between school support environments and teachers' productivity in public secondary schools in Kogi State.

Research Question Three: What is the relationship between the overall school environment and teachers' productivity in public secondary schools in Kogi State?

Hypothesis 3: What is the relationship between the overall school environment and teachers' productivity in public secondary schools in Kogi State?

Table 3: Correlation Between School Support Environment and Teachers' Productivity

Variables	N	Mean	SD	r	p-value	Decision
School Support Environment	358	3.10	0.74			
Teachers' Productivity	358	3.15	0.71	0.72	0.000	Significant

The results in Table 3 show a strong positive relationship between overall school environment and teachers' productivity ($r = 0.72$, $p < 0.05$). This suggests that a combination of both physical and support-related environmental factors plays a crucial role in enhancing teachers' effectiveness. The stronger correlation observed at the composite level implies that improvements in school infrastructure and institutional support systems collectively contribute more significantly to teachers' productivity than either dimension alone. Since the p-value (0.000) is less than the 0.05 threshold, the null hypothesis is rejected. This confirms that there is a statistically significant relationship between overall school environment and teachers' productivity in public secondary schools in Kogi State.

Discussion of Findings

The findings of this study revealed that there is a significant positive relationship between school environment and teachers' productivity in public secondary schools in Kogi State. Specifically, both the physical and school support dimensions of the environment were found to significantly influence teachers' effectiveness, with the combined effect of these variables showing the strongest relationship with productivity. The first finding indicated a moderate positive relationship between the physical school environment and teachers' productivity. This suggests that improvements in infrastructural facilities such as classrooms, furniture, lighting, ventilation, and maintenance contribute meaningfully to teachers' ability to perform their instructional duties effectively. This finding is consistent with the work of Gbesoevi et al. (2023), who reported that conducive physical conditions enhance teachers' instructional delivery and classroom management. It also aligns with the findings of Ossai and Okokoyo (2024), who identified the physical work environment as a significant determinant of teachers' output. This implies that when teachers work in well-structured, comfortable environments, they are more likely to demonstrate greater commitment and efficiency in their responsibilities.

In addition, the second finding revealed a strong positive relationship between the school support environment and teachers' productivity. This indicates that institutional factors such as the availability of instructional materials, administrative support, and supportive school policies play a crucial role in enhancing teachers' performance. This finding aligns with the study by Umar et al. (2024), which found that adequate institutional support significantly improves teachers' effectiveness. Similarly, Ezema et al. (2023) reported that supportive school systems contribute to increased teacher commitment and improved performance outcomes. The stronger relationship observed in this study suggests that while physical infrastructure is important, the presence of functional support systems may have a more direct and immediate impact on teachers' productivity. The third finding showed that the overall school environment has a strong positive relationship with teachers' productivity, with the highest correlation coefficient among the variables studied. This implies that the combined influence of physical and support environments provides a more comprehensive explanation of differences in

teachers' productivity. This finding supports the assumption of ecological systems theory, which states that human performance is shaped by the interaction of multiple environmental factors. In this context, teachers' productivity is not determined by a single element but by the combined effect of physical conditions and institutional support systems within the school. The finding also supports the argument that isolated improvements in infrastructure without corresponding institutional support may not yield optimal outcomes in teacher performance. Thus, the findings of this study highlight the importance of a holistic approach to educational improvement. While recent interventions in Kogi State, such as infrastructural upgrades and educational support programmes, have contributed positively to school conditions, their effectiveness in enhancing teachers' productivity depends on how well these components function together. The study, therefore, provides empirical evidence that both physical and support dimensions of the school environment are critical in shaping teachers' productivity and that integrated efforts are required to achieve sustained improvements in educational outcomes.

Conclusion

This study examined the relationship between school environment and teachers' productivity in public secondary schools in Kogi State amid recent educational interventions. The findings revealed that both physical and school support environments have significant positive relationships with teachers' productivity. Specifically, the physical school environment was found to influence teachers' effectiveness moderately, while the school support environment demonstrated a stronger influence. Furthermore, the combined effect of both dimensions of the school environment showed the strongest relationship with teachers' productivity. The study, therefore, concludes that teachers' productivity is best enhanced through a holistic improvement of both physical and support aspects of the school environment. In the context of ongoing educational interventions in Kogi State, this study provides empirical evidence that comprehensive environmental improvements can positively impact teachers' effectiveness. It further highlights that isolated efforts focusing only on infrastructure without corresponding support systems may not yield optimal results in improving teachers' productivity.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Government and education stakeholders should prioritise the continuous improvement and maintenance of physical school facilities, including classrooms, furniture, ventilation, and sanitation, to create a more conducive teaching and learning environment.
2. School administrators should strengthen institutional support systems by ensuring the regular provision of instructional materials and fostering supportive administrative practices that enhance teachers' effectiveness.
3. Policymakers should design and implement integrated educational interventions that simultaneously address both infrastructural development and institutional support mechanisms, rather than focusing on one dimension in isolation.
4. School leadership should create enabling environments that promote teacher engagement, including providing professional support, supervision, and encouragement that facilitate effective instructional delivery.

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