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Teachers' Pedagogical Competence and Classroom Management as Predictors of Students' Academic Performance in Public Secondary Schools in Rivers State, Nigeria

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ABSTRACT

The study examined teachers' pedagogical competence and classroom management as predictors of students' academic performance in public secondary schools in Rivers State, Nigeria. Two objectives, two research questions and two null hypotheses guided the study, which adopted a correlational research design. The population comprised 6,174 teachers and 193,436 students in 311 public secondary schools. A multistage sampling procedure produced an initial sample of 462 teachers and 462 students' academic-performance records from 66 schools; 417 valid teacher responses and 417 corresponding academic-performance records constituted the final matched dataset. Data on pedagogical competence and classroom management were obtained from the relevant clusters of the Teachers' Professional Characteristics Scale, while students' scores were extracted from official school records through a Students' Academic Performance Record Proforma. The researcher's supervisors and an expert in Measurement and Evaluation validated the instruments, and Cronbach Alpha coefficients of .918 and .948 were obtained for the two clusters respectively. Simple regression answered the research questions, while the t-test associated with simple regression tested the hypotheses at the .05 level of significance. Pedagogical competence accounted for 36.2% of the variance in students' academic performance, whereas classroom management accounted for 25.2%; both regression coefficients were statistically significant. The study concluded that both teacher characteristics were significant predictors of students' academic performance within the study context.

Keywords: Pedagogical competence, classroom management, teachers, academic performance, public secondary schools

INTRODUCTION

Education provides the institutional means through which societies develop the knowledge, skills and dispositions required for individual advancement and national development. Within secondary schools, students' academic performance remains one of the principal indicators used to assess the effectiveness of teaching and learning. Márquez et al. (2023) described academic performance in terms of students' learning attainment as reflected in participation, assignments, tests, continuous assessment and overall academic progress. Although achievement is shaped by student, family and school conditions, the teacher remains central because teacher-led classroom instruction converts curriculum expectations into actual learning experiences. A persistent weakness in students' academic performance often raise questions

about the professional capacities that teachers apply in lesson preparation, instructional delivery, assessment and classroom organisation.

Public secondary education in Nigeria is expected to prepare students for higher education, employment, responsible citizenship and productive participation in society (Federal Republic of Nigeria [FRN], 2014). Achieving these purposes requires teachers who can present subject matter clearly and manage classrooms in ways that sustain attention, participation and orderly learning. Public secondary education in Nigeria is intended to equip students for higher education, employment, responsible citizenship, and active participation in society (Federal Republic of Nigeria [FRN], 2014). The achievement of these aims depends partly on the quality of classroom instruction, where curriculum content is explained, organized, practised, and assessed. Teachers therefore need both pedagogical competences, meaning the ability to select and apply suitable instructional methods, and classroom-management skills to sustain conditions that support continuous learning. When either of these capacities is lacking, students may face poorly structured lessons, limited engagement, or classroom disruption, all of which reduce the effectiveness of teaching. This makes pedagogical competence and classroom management important teacher characteristics to examine in relation to students' academic performance.

Pedagogical competence refers to teachers' ability to plan lessons systematically, choose appropriate teaching methods, explain concepts clearly, use instructional materials effectively, and assess learning through relevant feedback (Edu, 2025). These practices transform curriculum content into organized and meaningful learning experiences. A teacher may possess extensive subject knowledge yet achieve limited instructional success when explanations, examples, questions, activities and assessments do not correspond with students' learning needs. Pedagogical competence therefore concerns the quality of the instructional decisions through which teachers organise, present and assess subject matter.

Previous research has consistently linked teachers' pedagogical skills, subject-content knowledge, and teaching strategies to students' academic performance. In Rivers State, both pedagogical skills and subject-content knowledge were found to have significant relationships with students' achievement (Amadi-Ali, 2025), while teaching strategies were similarly associated with performance in Port Harcourt Metropolis (Edu, 2025). In Anambra State, content knowledge and pedagogical skills were positively related to students' achievement in Mathematics (Onyekwelu, 2024). Although these studies examined different aspects of teacher competence across varied subjects and locations, their findings converge on the conclusion that the quality of teachers' instructional knowledge and practice is strongly associated student achievement. Building on this evidence, the present study focuses on pedagogical competence as a distinct predictor of academic performance.

Classroom management represents a related but distinct professional capacity. It encompasses the organisation of instructional space, establishment of routines, regulation of student behaviour, supervision of learning activities and maintenance of conditions that allow teaching to proceed with minimal disruption (Oluwadayo & Samuel, 2021). Classroom management therefore extends beyond the control of misconduct to include the organisation of time, space, rules and student participation during instruction. Teachers manage classrooms by allocating instructional time, arranging seating and movement, communicating behavioural expectations, supervising participation and responding to disruptions in ways that help sustain attention to learning. Where classroom routines are weak, disruptions can persist, instructional time may be lost and students' concentration may decline, even when lesson content and teaching methods are otherwise appropriate.

Several studies have linked classroom-management practices to students' academic performance. In Rivers State public secondary schools, classroom discipline, effective teaching, and reward systems were positively associated with student achievement (Sunday-Piaro, 2018). Similarly, classroom instructional supervision significantly predicted academic performance in Adamawa State (Abba & Awodoyin, 2024). However, the evidence is not consistent across all management practices. One study found that teaching strategies and learning facilities were positively related to Mathematics performance, whereas classroom discipline showed a negative relationship (Oluwadayo & Samuel, 2021). This variation suggests that classroom management can be viewed as the organization and supervision of learning conditions rather

than as behavioural control alone. Ukaigwe and Igbozuruike (2019) remarked that pedagogical competence and classroom management perform complementary functions within instruction, although they remain conceptually distinct. The scholars argued that pedagogical competence concerns the quality of lesson planning, explanation, instructional method and assessment, whereas classroom management concerns the conditions under which those instructional processes occur. A carefully planned lesson may produce limited learning when noise, interruptions or weak routines prevent students from engaging with instruction. Conversely, an orderly classroom cannot compensate for unclear explanations, unsuitable methods or poorly aligned assessment. The two characteristics therefore address different requirements of effective classroom practice: one concerns the quality of instructional action, while the other concerns the organisation of the environment in which that action takes place.

Existing Nigerian studies have examined pedagogical skills, subject-content knowledge, classroom discipline, teaching strategies, instructional supervision and related management practices in separate subjects and locations. The reviewed evidence does not, however, show within one sample drawn from public secondary schools across Rivers State how much variance in students' academic performance is separately associated with teachers' pedagogical competence and classroom management. Examining both characteristics in the same study allows their separate bivariate predictive relationships with academic performance to be compared under the same sampling and measurement conditions. The present study therefore examined teachers' pedagogical competence and classroom management as predictors of students' academic performance in public secondary schools in Rivers State.

Statement of the Problem

Students are more likely to achieve expected learning outcomes when teachers possess the pedagogical competence required to plan lessons, explain subject matter clearly, select appropriate teaching methods and assess learning effectively, while also maintaining classrooms that support attention and participation. In public secondary schools in Rivers State, however, concerns remain about the extent to which teachers consistently demonstrate these capacities during instruction. Some teachers may struggle to organise lessons around students' learning needs, communicate difficult concepts clearly, use suitable assessment practices or provide feedback that guides improvement. Classroom routines may also be weak in some settings, allowing disruption, poor supervision and ineffective use of instructional time to interfere with learning. Where such difficulties persist, students may receive instruction that is less organised and less responsive to their learning needs, even when curriculum content is available. The concern is therefore not simply whether teachers possess professional knowledge, but whether their pedagogical competence and classroom management are sufficiently associated with the academic performance students attain. Existing studies have examined related teacher characteristics, yet the separate predictive contributions of these two variables across public secondary schools in Rivers State remain insufficiently established. This study therefore examined teachers' pedagogical competence and classroom management as predictors of students' academic performance in public secondary schools in Rivers State,

Aim and Objectives

The aim of the study was to examine teachers' pedagogical competence and classroom management as predictors of students' academic performance in public secondary schools in Rivers State. Specifically, the study sought to:

1. determine the extent to which teachers' pedagogical competence predicts students' academic performance in public secondary schools in Rivers State.
2. examine the extent to which teachers' classroom management predicts students' academic performance in public secondary schools in Rivers State.

Research Questions

The following research questions were answered in the study:

1. To what extent does teachers' pedagogical competence predict students' academic performance in public secondary schools in Rivers State?
2. To what extent does teachers' classroom management predict students' academic performance in public secondary schools in Rivers State?

Hypotheses

The following null hypotheses were tested at the 0.05 level of significance:

1. Teachers' pedagogical competence does not significantly predict students' academic performance in public secondary schools in Rivers State.
2. Teachers' classroom management does not significantly predict students' academic performance in public secondary schools in Rivers State.

METHODOLOGY

The study adopted a correlational research design. The population consisted of 199,610 teachers and students in 311 public secondary schools in Rivers State, comprising 6,174 teachers and 193,436 students. The sample for the study comprised 924 participants and records, consisting of 462 teachers and 462 students' academic-performance records drawn from 66 public secondary schools across 11 Local Government Areas. The sample was arrived at through a multistage sampling procedure. At the first stage, 11 Local Government Areas were selected by balloting. At the second stage, six public secondary schools were selected from each Local Government Area, giving 66 schools. At the third stage, seven teachers were selected from each sampled school, while at the fourth stage, seven students' academic-performance records were obtained from each school. Teachers' pedagogical competence and classroom management were measured with the relevant clusters of the 36-item Teachers' Professional Characteristics Scale (TPCS), which used a modified four-point response scale of Very High Extent, High Extent, Low Extent and Very Low Extent. Students' academic performance scores were obtained from approved SS1, SS2 and SS3 school records through a Students' Academic Performance Record Proforma. The researchers and experts in Measurement and Evaluation validated the instruments. A pilot administration involving 20 teachers who were not part of the study sample yielded Cronbach Alpha coefficients of .918 for pedagogical competence and .948 for classroom management. Of the 462 copies of the TPCS administered, 417 were properly completed and retrieved, representing a 90.26% retrieval rate. A corresponding set of 417 valid students' academic-performance records was obtained and matched with the 417 valid teacher responses to constitute the final dataset. Simple regression was used to answer the two research questions. The t-test associated with each simple-regression coefficient was used to test the corresponding null hypothesis at the .05 level of significance. The analyses were conducted with SPSS version 27.

RESULTS

Research Question One: *To what extent does teachers' pedagogical competence predict students' academic performance in public secondary schools in Rivers State?*

Table 1: Simple regression analysis of teachers' pedagogical competence and students' academic performance in public secondary schools in Rivers State

Model	R	R Square	Adjusted R Square	Variance Explained	Interpretation
1	.602	.362	.361	36.2%	Positive relationship

Predictor: *teachers' pedagogical competence;* Dependent variable: *students' academic performance.*

Table 1 shows a positive relationship between teachers' pedagogical competence and students' academic performance (R = .602). The coefficient of determination (R^2 = .362) indicates that pedagogical competence accounted for 36.2% of the variance in students' academic performance in the simple-regression model. The remaining 63.8% of the variance was not explained by pedagogical competence in this model.

Research Question Two: *To what extent does teachers' classroom management predict students' academic performance in public secondary schools in Rivers State?*

Table 2: Simple regression analysis of teachers' classroom management and students' academic performance in public secondary schools in Rivers State

Model	R	R Square	Adjusted R Square	Variance Explained	Interpretation
1	.502	.252	.250	25.2%	Positive relationship

Predictor: *teachers' classroom management*; Dependent variable: *students' academic performance.*

Table 2 shows a positive relationship between teachers' classroom management and students' academic performance (R = .502). The coefficient of determination (R^2 = .252) indicates that classroom management accounted for 25.2% of the variance in students' academic performance in the simple-regression model. The remaining 74.8% of the variance was not explained by classroom management in this model.

Test of Hypotheses

H_{01}: Teachers' pedagogical competence does not significantly predict students' academic performance in public secondary schools in Rivers State.

Table 3: Regression coefficient for teachers' pedagogical competence as a predictor of students' academic performance

Model	B	Std. Error	Beta	t-value	p-value	Critical t	Decision
Constant	23.138	3.126		7.401	< .001		
Teachers' pedagogical competence	1.372	.094	.602	14.576	< .001	±1.96	Reject H_{01}

Dependent variable: *students' academic performance*; α = .05.

The regression coefficient for teachers' pedagogical competence was statistically significant (p < .001). The null hypothesis was therefore rejected. This result indicates that the positive predictive relationship between pedagogical competence and students' academic performance was statistically significant at the .05 level.

H_{02}: Teachers' classroom management does not significantly predict students' academic performance in public secondary schools in Rivers State.

Table 4: Regression coefficient for teachers' classroom management as a predictor of students' academic performance

Model	B	Std. Error	Beta	t-value	p-value	Critical t	Decision
Constant	33.882	3.101		10.927	< .001		
Teachers' classroom management	1.067	.095	.502	11.214	< .001	±1.96	Reject H_{02}

Dependent variable: *students' academic performance*; α = .05.

The regression coefficient for teachers' classroom management was statistically significant (p < .001). The null hypothesis was therefore rejected. This result indicates that the positive predictive relationship

between classroom management and students' academic performance was statistically significant at the .05 level.

DISCUSSION OF FINDINGS

Teachers' Pedagogical Competence and Students' Academic Performance

The result showed that teachers' pedagogical competence accounted for 36.2% of the variance in students' academic performance ($R = .602$, $R^2 = .362$), and the corresponding regression coefficient was statistically significant ($t = 14.576$, $p < .001$). The magnitude of the relationship indicates that variation in teachers' pedagogical competence was associated with variation in students' academic performance within the sampled schools. Pedagogical competence operates at the point where teachers transform subject knowledge into lesson plans, explanations, questions, learning activities, assessment and feedback. When teachers align these elements with students' learning needs, students encounter closer correspondence between what teachers present, what they practise and what they are expected to demonstrate. Evidence from Rivers State is consistent with the finding of this study. Significant relationships have been reported between pedagogical skills, subject-content knowledge and students' academic performance (Amadi-Ali, 2025), while teaching strategies have also been linked with academic performance in Port Harcourt Metropolis (Edu, 2025). Because both studies were conducted within Rivers State, their results are particularly relevant to the present study: each associates teachers' instructional competence with students' achievement within the same state education system. Studies in Anambra and Adamawa States likewise reported positive relationships between pedagogical skills, content knowledge, subject-matter mastery and students' achievement (Bakari et al., 2025; Onyekwelu, 2024). Studies in Akwa Ibom and Kwara States similarly linked teachers' pedagogical and subject-content knowledge with students' academic performance in secondary schools (Amie-Ogan & Friday, 2020; Olasehinde-Williams et al., 2018). The studies indicate that students' academic performance depends not only on the knowledge teachers possess, but also on how effectively they translate that knowledge into classroom practice through lesson organisation, clear explanation and appropriate assessment. The present result therefore highlights the importance of teachers' practical use of pedagogical knowledge during instruction, rather than the possession of professional knowledge alone.

Teachers' Classroom Management and Students' Academic Performance

The result further showed that teachers' classroom management accounted for 25.2% of the variance in students' academic performance ($R = .502$, $R^2 = .252$), while the regression coefficient was statistically significant ($t = 11.214$, $p < .001$). The result indicates that students' academic performance is associated with how effectively teachers organise classroom routines, regulate behaviour, supervise learning activities and protect time for instruction. When routines are unclear, supervision is weak or disruptions persist, students may lose opportunities to listen, participate and practise what is being taught. in contrast, well-organised routines and active supervision can help teachers use instructional time more effectively and keep students engaged in learning activities. The result therefore suggests that classroom management contributes to academic performance through the creation of orderly and supportive conditions for teaching and learning, rather than through discipline alone.

Previous studies similarly show that students' academic performance is related to how teachers organise and supervise classroom learning. In Rivers State, classroom discipline, effective teaching and reward systems have been positively associated with students' academic performance in public secondary schools (Ebimiere et al., 2020; Sunday-Piaro, 2018), while effective teaching and delegation of authority have also shown positive relationships with pupils' performance (Nwankwoala, 2021). Studies in Adamawa and Anambra States have likewise linked classroom arrangement, instructional supervision, behavioural management and classroom organisation with students' academic outcomes (Abba & Awodoyin, 2024; Manafa, 2025; Oparaji et al., 2020; Uzoh & Obi, 2025). Although these studies examined different classroom-management practices, they share a common concern with how teachers organise the learning environment, supervise students and maintain conditions that allow instruction to proceed effectively. Taken together, the evidence suggests that classroom management is relevant to academic performance

because it helps structure participation, preserve instructional time and sustain supervision during learning.

The evidence is not entirely consistent, which suggests that stronger classroom control does not necessarily correspond with better academic performance. Oluwadayo and Samuel (2021), for example, reported positive relationships between teaching strategies, learning facilities and students' Mathematics performance, whereas classroom discipline showed a negative relationship and classroom motivation showed only a low positive relationship. This pattern suggests that the academic value of classroom management depends on how teachers manage the learning environment. Behavioural control alone may not produce the same outcomes as management that combines clear routines, supportive motivation, purposeful supervision and appropriate instructional strategies. The present result should therefore be interpreted in relation to the broader organisation of classroom conditions rather than as evidence that stricter discipline improves achievement. Its practical implication is that classroom management is more educationally useful when behavioural regulation is integrated with instructional organisation, supervision and active student participation.

In comparison of the two regression results, pedagogical competence demonstrated the stronger relationship with students' academic performance, accounting for 36.2% of the variance compared with 25.2% accounted for by classroom management. However, these percentages should not be interpreted as separate contributions that can be added together because each predictor was analysed in a different simple-regression model. The results instead show that the two teacher characteristics relate to different but complementary aspects of classroom practice. Pedagogical competence concerns how teachers plan, explain, deliver and assess instruction, while classroom management concerns how they organise and supervise the environment in which learning takes place. The results suggest that students' academic performance is related both to the quality of instruction they receive and to the classroom conditions in which that instruction occurs.

CONCLUSION

The study established that teachers' pedagogical competence and classroom management separately and significantly predicted students' academic performance in public secondary schools in Rivers State. Pedagogical competence accounted for 36.2% of the variance in academic performance, while classroom management accounted for 25.2% in the separate simple-regression models. The study therefore concludes that both teacher characteristics are statistically significant predictors of students' academic performance, with pedagogical competence showing the larger bivariate predictive relationship in the present data.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made:

1. Schools should strengthen teachers' pedagogical competence through professional learning that focuses on lesson planning, instructional methods, clear subject-content delivery, questioning, assessment and feedback, with attention to how these practices are applied during classroom instruction.
2. Teachers should apply classroom-management practices that combine clear routines, appropriate seating and time organisation, positive behavioural regulation, active supervision and sustained student participation rather than relying on discipline as an isolated control measure.
3. The Rivers State Ministry of Education and school administrators should align capacity-building and instructional supervision with the specific practices examined in the study, particularly lesson planning, instructional methods, assessment, classroom routines, behavioural regulation and active supervision.

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