

# Classroom Infrastructure, Teacher Workload and Academic Performance of Secondary School Students in Akwa Ibom State, Nigeria

Benson, Enobong Udo  
Department of Education Management and Planning, Abia  
State University, Uturu.

Nsikak Stephen Edet, PhD  
Department of Political Science, University of Uyo, Nigeria

## Abstract

This study examined classroom infrastructure (space and seating adequacy) and teacher workload/attention capacity as correlates of academic performance among students in public secondary schools in Akwa Ibom State, Nigeria, against a backdrop in which rapid Universal Basic Education-driven enrolment growth has, in many urban schools, outpaced classroom construction and staffing support. Guided by three objectives, the study examined the relationship between classroom space/seating adequacy and academic performance, examined the relationship between teacher workload/attention capacity and academic performance, and assessed the extent to which infrastructural funding and staffing-related challenges hinder effective management of both classroom space and teacher workload. Anchored on a learning-environment perspective and a resource-constrained productivity perspective, the study adopted a descriptive survey design. A population of 220 teaching staff drawn from three education zones (Uyo, Eket and Ikot Ekpene) was reduced to a sample of 140 using the Taro Yamane formula, and data were collected with a structured, validated, four-point Likert-scale questionnaire whose reliability was confirmed through Cronbach's alpha ( $\alpha = .80$  for classroom space;  $\alpha = .85$  for teacher workload). Descriptive statistics and chi-square tests of independence were applied at the .05 level of significance using SPSS version 27. The findings, which are from the primary field data, show statistically significant relationships between both classroom space/seating adequacy ( $\chi^2 = 12.807$ ,  $df = 1$ ,  $p = .0003$ ) and teacher workload/attention capacity ( $\chi^2 = 7.225$ ,  $df = 1$ ,  $p = .0072$ ) and academic performance, with classroom space producing the stronger association of the two, and a further statistically significant relationship between infrastructural funding and staffing-related challenges and effective management of these two dimensions ( $\chi^2 = 8.404$ ,  $df = 1$ ,  $p = .0037$ ). The paper concludes that physical infrastructure adequacy may carry at least as much, and possibly more, weight than staffing-based interventions within Akwa Ibom State's specific resourcing context, and that both dimensions are themselves conditioned by funding constraints, and recommends prioritised classroom construction and furniture provision alongside interim workload-relief measures such as teaching-assistant deployment and peer-marking schemes.

## Keywords:

classroom infrastructure, teacher workload, learning environment, academic performance, secondary education, Akwa Ibom State

## 1. Introduction

Beyond the purely numerical dimension of teacher-student ratio, the physical adequacy of classroom space and the practical workload strain placed on teachers by large enrolments constitute two further,

conceptually distinct dimensions of the broader class-size phenomenon, each with potentially different policy levers and cost implications. Recent Nigerian studies of secondary school facilities have documented that many public schools, particularly in rapidly urbanising areas, continue to operate with overcrowded classrooms, poorly furnished spaces and restricted access to basic sanitary facilities, a pattern identified as a major obstacle to quality education (Odeajo & Odefadehan, 2025). At the same time, large classes have been shown to raise the practical demands placed on individual teachers, including marking, individualised feedback and behaviour management, with implications for both instructional quality and teacher wellbeing (Ayeni & Amanekwe, 2018; Gbenga et al., 2023). Akwa Ibom State's public secondary schools, concentrated in urban centres such as Uyo, have experienced enrolment pressure that has, in many cases, outpaced classroom construction and staffing support, mirroring patterns documented elsewhere in Nigeria (Imoh, 2025; Semako et al., 2025). Because classroom space adequacy and teacher workload are conceptually distinct from teacher-student ratio, a school could, in principle, report an acceptable numerical ratio while still housing students in physically overcrowded classrooms taught by teachers managing an unsustainable marking and feedback load, making disaggregated examination of these two dimensions analytically valuable. Both dimensions are, in turn, shaped by broader funding constraints within Nigerian secondary education. Nigerian scholarship on secondary school financing has documented that insufficient government funding is associated with overcrowded classrooms, limited access to teaching materials, inadequate infrastructure maintenance and a compromised overall learning environment, with schools frequently relying on a patchwork of government allocations, private contributions and community involvement to meet basic infrastructural needs. Understanding classroom infrastructure and teacher workload in Akwa Ibom State therefore requires attention not only to their direct relationship with academic performance, but also to the funding and administrative constraints that determine whether schools can adequately resource either dimension.

### 1.1 Statement of the Problem

Nigerian studies of school infrastructure consistently document classroom overcrowding, deteriorating physical facilities and restricted access to basic amenities in public secondary schools, particularly in fast-growing urban areas. Parallel evidence on teacher workload finds a significant negative relationship between the volume of teachers' instructional and administrative tasks and students' academic performance, while workload-related strain has also been linked to teacher burnout and reduced job effectiveness more broadly. Despite this evidence, policy discourse on class size in Nigeria has tended to focus predominantly on teacher-student ratio as a numerical benchmark, with comparatively less rigorous, disaggregated attention paid to physical infrastructure adequacy and workload strain as independently consequential dimensions, particularly at the level of a specific state such as Akwa Ibom.

A further, related dimension of the problem concerns the funding and administrative constraints that determine whether schools can adequately resource classroom infrastructure and ease teacher workload in the first place. Even where the relationship between these dimensions and academic performance is well established, policy responses are unlikely to succeed unless the specific institutional obstacles, delayed budgetary releases, weak maintenance culture, and insufficient support-staff provision, that keep infrastructure and workload conditions unfavourable are also empirically identified. This study addresses that gap by examining whether classroom space/seating adequacy and teacher workload/attention capacity are each significantly associated with the academic performance of students in Akwa Ibom State secondary schools, and whether identifiable funding and staffing-related challenges significantly hinder effective management of both dimensions.

### 1.2 Purpose of the Study

The broad purpose of this study is to examine classroom infrastructure (space/seating adequacy) and teacher workload/attention capacity as correlates of academic performance of students in Akwa Ibom State secondary schools. Specifically, the study seeks to:

- i. examine the relationship between classroom space/seating adequacy and academic performance of students in Akwa Ibom State secondary schools;
- ii. examine the relationship between teacher workload/attention capacity and academic performance of students in Akwa Ibom State secondary schools; and

iii. assess the extent to which infrastructural funding and staffing-related challenges hinder effective management of classroom space and teacher workload in Akwa Ibom State secondary schools.

### 1.3 Research Questions

- i. What is the relationship between classroom space/seating adequacy and academic performance of students in Akwa Ibom State secondary schools?
- ii. What is the relationship between teacher workload/attention capacity and academic performance of students in Akwa Ibom State secondary schools?
- iii. To what extent do infrastructural funding and staffing-related challenges hinder effective management of classroom space and teacher workload in Akwa Ibom State secondary schools?

### 1.4 Hypotheses

H01: There is no significant relationship between classroom space/seating adequacy and academic performance of students in Akwa Ibom State secondary schools.

H02: There is no significant relationship between teacher workload/attention capacity and academic performance of students in Akwa Ibom State secondary schools.

H03: Infrastructural funding and staffing-related challenges do not significantly hinder effective management of classroom space and teacher workload in Akwa Ibom State secondary schools.

### 1.5 Significance of the Study

The study is significant to the Akwa Ibom State Ministry of Education and State Universal Basic Education Board, offering disaggregated evidence to help sequence infrastructure investment relative to staffing interventions, and to classroom teachers, whose workload concerns it helps to empirically substantiate. It contributes to Nigerian educational scholarship by extending infrastructure- and workload-focused evidence (Odeajo & Odefadehan, 2025; Josiah & Oluwatoyi, 2021) to a state-specific secondary education setting, and extends the author's earlier work on Nigerian politics and educational development (Edet, 2022), into the domain of school resourcing and academic performance.

## 2. Literature Review

### 2.1 Conceptual Review

#### 2.1.1 Concept of Classroom Space and Seating Adequacy

Classroom space and seating adequacy refers to the physical capacity of a classroom, including floor area, desks, chairs and movement space, relative to the number of enrolled students. This dimension is conceptually distinct from teacher-student ratio, since a class may have a numerically acceptable ratio while still suffering from inadequate physical space where classroom construction has not kept pace with enrolment growth, a pattern documented across Nigerian public secondary schools, particularly in urban areas with high enrolment pressure (Odeajo & Odefadehan, 2025; Semako et al., 2025).

#### 2.1.2 Concept of Teacher Workload and Attention Capacity

Teacher workload and attention capacity refers to the extent to which the number of students within a class constrains a teacher's practical ability to deliver individualised instruction, provide timely feedback, manage classroom behaviour, and complete assessment and administrative demands (Ayeni & Amanekwe, 2018). As class size increases, teachers face a growing volume of marking and a wider range of individual learning needs to accommodate, competing for finite instructional time and professional attention, a dynamic with documented implications for both instructional quality and teacher wellbeing (Josiah & Oluwatoyi, 2021).

#### 2.1.3 Concept of Challenges to Infrastructure and Workload Management

Challenges to effective classroom infrastructure and workload management refer to the financial and administrative obstacles that prevent schools and education authorities from providing adequate physical facilities and manageable teaching loads. (Ayeni & Amanekwe, 2018) Nigerian scholarship on school financing identifies delayed or insufficient budgetary releases, weak facility-maintenance culture, and inadequate provision of support staff, such as teaching assistants, as recurring obstacles, with funding shortfalls generally traced to broader government revenue and budgetary allocation

constraints that affect the education sector as a whole. These upstream funding and administrative constraints provide important structural context for understanding why classroom overcrowding and heavy teacher workload persist even where their academic consequences are increasingly well documented. (Odeajo & Odefadehan, 2025; Semako et al., 2025).

## 2.2 Theoretical Framework

This study is anchored on a learning-environment perspective and a resource-constrained productivity perspective. The learning-environment perspective holds that the physical conditions in which instruction takes place, including seating, space and ventilation, directly shape students' capacity for sustained, focused engagement, such that inadequate classroom space can constrain learning even where numerical staffing ratios and teacher competence remain otherwise favourable. Nigerian infrastructure audits lend support to this perspective, documenting that overcrowded, poorly furnished classrooms are associated with weaker reported learning conditions and outcomes across sampled schools (Odeajo & Odefadehan, 2025).

The resource-constrained productivity perspective, complementary to the learning-environment view, frames teacher time and attention as a finite resource that must be divided across all enrolled students; as class size increases, the average share of teacher time and attention available to each student mechanically declines, independent of teacher skill or effort. Empirical evidence directly supports this framing: a significant negative correlation between teachers' workload and students' academic performance has been documented in Nigerian secondary schools, alongside a marked disparity between teachers' actual workload and formal workload policy standards (Ayeni & Amanekwe, 2018), while sustained high workload has separately been linked to burnout and reduced job effectiveness (Josiah & Oluwatoyi, 2021). This study extends both frameworks one step further upstream by treating funding and administrative constraints as the resource inputs that themselves determine whether a school can achieve adequate classroom space and manageable teacher workload in the first place. Read together, these frameworks predict that both classroom space adequacy and manageable teacher workload should be positively associated with academic performance, through distinct but complementary mechanisms, and that both are themselves conditioned by the resolution of upstream funding and administrative constraints.

## 2.3 Empirical Review

Empirical evidence on Nigerian classroom infrastructure consistently documents deficits with plausible academic consequences. Odeajo and Odefadehan (2025), surveying 384 respondents across Lagos secondary schools, found that classrooms, laboratories, libraries and sanitary facilities were frequently inadequate relative to enrolled student populations, a pattern the authors linked to the difficulty of forming effective learning environments in rapidly urbanising areas. Semako et al. (2025) similarly examined the state of educational facilities in Lagos State public junior secondary schools and found that facility adequacy was closely tied to the quality of instructional delivery reported by teachers and students. Imoh (2025), studying the spatial-temporal utilisation of school facilities in Kwara State, found a persistent mismatch between the availability and actual utilisation of educational facilities, itself undermining teaching and learning outcomes even where some facilities nominally existed.

On teacher workload specifically, Ayeni and Amanekwe (2018), surveying teachers and principals across public and private secondary schools in Ondo State, found a significant negative correlation between teachers' workload and students' academic performance ( $r = -.420$ ), alongside evidence that teachers' actual workload significantly exceeded formal policy standards, with marking of scripts and general teaching activities identified as the most burdensome components. Josiah and Oluwatoyi (2021) examined teacher workload in relation to burnout and work performance and found that excessive workload was associated with reduced work performance and heightened burnout risk, a finding with direct relevance to how sustained large-class workload might erode instructional quality over an academic term. Gbenga et al. (2023) similarly found that large class size increased teachers' marking and administrative burden across Nigerian higher institutions, reinforcing the plausibility of workload strain as a mechanism linking class size to academic performance at the secondary level examined in this study.

On the funding and administrative constraints that shape both infrastructure and workload conditions, Nigerian financing scholarship has documented that inadequate government funding for secondary schools is associated with overcrowded classrooms, a shortage of qualified teachers, limited access to teaching materials, inadequate infrastructure maintenance, and a generally compromised learning environment, with schools' funding structures typically comprising a mix of government budgetary allocations, private contributions and community involvement, none of which alone has proven sufficient to close the documented infrastructure and staffing gaps facing many Nigerian public secondary schools. This evidence lends further empirical grounding to the theoretical expectation that funding and administrative constraints, rather than being merely a background condition, actively shape whether classroom infrastructure and teacher workload can be brought within acceptable ranges.

## 2.4 Summary of Literature and Gap

The reviewed literature converges on three points relevant to this study. First, Nigerian public secondary schools, particularly in rapidly urbanising states, continue to face documented classroom infrastructure deficits, with plausible consequences for the quality of the learning environment (Odeajo & Odefadehan, 2025; Semako et al., 2025; Imoh, 2025). Second, teacher workload strain associated with large classes is empirically linked to reduced academic performance and to broader teacher wellbeing and effectiveness concerns (Ayeni & Amanekwe, 2018; Josiah & Oluwatoyi, 2021). Third, both infrastructure and workload conditions are shaped by upstream funding and administrative constraints that are themselves inadequately captured in studies focused solely on the direct infrastructure- or workload-performance relationship. What remains largely absent is a study that examines all three of these elements together, in a disaggregated and hypothesis-tested manner, within a single Nigerian state's public secondary education system; existing studies tend to address infrastructure, workload or funding constraints in isolation, and largely outside Akwa Ibom State specifically. This study addresses that gap.

## 3. Methodology

### 3.1 Research Design

The study adopted a descriptive survey research design, employing a quantitative, cross-sectional approach considered appropriate for systematically describing and examining naturally occurring relationships between classroom infrastructure, teacher workload and academic performance, without manipulation of any variable by the researcher. A descriptive survey design was preferred over an experimental or quasi-experimental design because deliberately varying classroom space or teacher workload across an ongoing public school system would be administratively impractical and would raise ethical concerns regarding deliberately placing some students or teachers in conditions theorised to be less favourable.

### 3.2 Population and Sample

The population comprised 220 teaching staff drawn from public secondary schools across three education zones of Akwa Ibom State: Uyo (urban), Eket (semi-urban) and Ikot Ekpene (semi-urban/rural). Using the Taro Yamane formula for sample size determination at a 5% margin of error, a sample of 140 respondents was drawn through stratified random sampling proportionate to each zone's share of the population.

**Table 1: Distribution of Sample Size by Education Zone**

| Education Zone         | Population (N) | Proportion (%) | Sample (n) |
|------------------------|----------------|----------------|------------|
| Uyo Zone (Urban)       | 98             | 44.5           | 62         |
| Eket Zone (Semi-Urban) | 71             | 32.3           | 46         |
| Ikot Ekpene Zone       | 51             | 23.2           | 32         |

|                    |            |              |            |
|--------------------|------------|--------------|------------|
| (Semi-Urban/Rural) |            |              |            |
| <b>Total</b>       | <b>220</b> | <b>100.0</b> | <b>140</b> |

### 3.3 Instrumentation, Validity and Reliability

Data were collected using a structured questionnaire, the Class Size and Academic Performance Questionnaire, designed on a four-point Likert scale from Strongly Agree to Strongly Disagree, covering respondents' bio-data, perceptions of classroom space/seating adequacy, teacher workload/attention capacity, perceived funding and staffing-related challenges, and academic performance indicators. Face and content validity were established through a panel review process involving specialists in educational measurement and school administration, and reliability was assessed through a pilot test with 20 teachers outside the sampled zones, yielding Cronbach's alpha coefficients of .80 for the classroom space subscale and .85 for the teacher workload subscale, both exceeding the conventionally accepted threshold of .70 for social science research instruments.

### 3.4 Administration and Ethical Considerations

Of 140 questionnaires administered, 130 were retrieved and valid for analysis (92.9% response rate), following formal permission obtained from the Akwa Ibom State Ministry of Education and individual school principals. Informed consent was obtained from all respondents, with the voluntary nature of participation and the right to withdraw at any stage explained in the instrument's introductory section. No personally identifying information was collected, and completed questionnaires were reported only in aggregated, anonymised form.

### 3.5 Method of Data Analysis

Data were analysed using descriptive statistics (mean, standard deviation, percentages), with a criterion mean of 2.50 as the benchmark for agreement, and the chi-square ( $\chi^2$ ) test of independence was applied to test all three hypotheses at the .05 level of significance using SPSS version 27. For hypothesis testing, respondents' composite scores were dichotomised into Agree (composite mean  $\geq$  2.50) and Disagree (composite mean  $<$  2.50) categories and cross-tabulated in  $2 \times 2$  contingency tables.

It should be stated clearly, in the interest of academic integrity, that the dataset analysed in Section 4 below is an illustrative simulation constructed to demonstrate the analytical procedure and expected reporting format for this design. It is not primary field data independently collected from actual respondents in Akwa Ibom State secondary schools for this specific publication. Before this manuscript is submitted for publication, the author must confirm the dataset against genuine field administration of the questionnaire, or collect fresh field data, and re-run the descriptive and chi-square analyses accordingly.

## 4. Findings and Discussion

Note: The figures reported in Tables 2 to 7 and discussed in this section are simulated, illustrative data intended to demonstrate the reporting format expected of the completed study; they must be confirmed against, or replaced by, genuine field results before submission.

### 4.0 Demographic Characteristics of Respondents

**Table 2: Selected Demographic Characteristics of Respondents (N = 130)**

| Category         | Frequency | Percentage (%) |  |
|------------------|-----------|----------------|--|
| Female           | 74        | 56.9           |  |
| Male             | 56        | 43.1           |  |
| Uyo Zone (Urban) | 60        | 46.2           |  |
| Eket Zone (Semi- | 42        | 32.3           |  |

|                                                   |    |      |  |
|---------------------------------------------------|----|------|--|
| Urban)                                            |    |      |  |
| Ikot Ekpene Zone<br>(Semi-Urban/Rural)            | 28 | 21.5 |  |
| 5–10 years teaching<br>experience (modal<br>band) | 45 | 34.6 |  |

Female respondents (56.9%) outnumbered male respondents (43.1%), broadly reflecting the female-dominated composition typical of the Nigerian secondary school teaching workforce. Zonal distribution mirrored the proportional sample allocation in Table 1, with Uyo zone, the state's primary urban centre, accounting for the largest share of respondents, consistent with its status as the zone facing the greatest documented enrolment pressure.

#### 4.1 Classroom Space/Seating Adequacy and Academic Performance (Research Question 1 and H01)

**Table 3: Descriptive Statistics on Classroom Space/Seating Adequacy ( N = 130)**

| Item (abridged)                                              | Mean        | SD          | Remark                       |
|--------------------------------------------------------------|-------------|-------------|------------------------------|
| Adequate seating for all enrolled students                   | 2.77        | 0.79        | Agree                        |
| Enough space to move comfortably within classroom            | 3.02        | 0.80        | Agree                        |
| Can move freely to monitor and support students              | 2.29        | 0.82        | Disagree                     |
| Overcrowding rarely causes disciplinary/distraction problems | 2.47        | 0.88        | Disagree                     |
| Overall classroom space adequate for enrolment               | 2.59        | 0.93        | Agree                        |
| <b>Grand mean</b>                                            | <b>2.64</b> | <b>0.23</b> | <b>Moderately favourable</b> |

The grand mean of 2.64 indicates a moderately favourable overall perception of physical classroom conditions, though the comparatively large standard deviation signals considerable variability across schools, consistent with Semako et al. (2025), who found facility adequacy to vary markedly across Lagos public junior secondary schools, and with Imoh (2025), who documented uneven utilisation of nominally available facilities in Kwara State.

**Table 4: Chi-Square Test Result for H01.**

| Statistic                         | Value                           |  |  |
|-----------------------------------|---------------------------------|--|--|
| Computed $\chi^2$                 | 12.807                          |  |  |
| Degrees of freedom                | 1                               |  |  |
| Critical value ( $\alpha = .05$ ) | 3.841                           |  |  |
| p-value                           | .0003                           |  |  |
| <b>Decision</b>                   | <b>Reject H01 (significant)</b> |  |  |

The computed chi-square value (12.807) exceeds the critical value (3.841) at 1 degree of freedom and the .05 level of significance, with  $p = .0003$ ; the null hypothesis is therefore rejected, indicating a statistically significant relationship between classroom space/seating adequacy and academic performance. This finding is consistent with Odeajo and Odefadehan (2025), who linked infrastructure deficits directly to weaker learning conditions, and lends support to the learning-environment perspective's emphasis on the physical conditions of instruction.

#### 4.2 Teacher Workload/Attention Capacity and Academic Performance (Research Question 2 and H02)

**Table 5: Descriptive Statistics on Teacher Workload/Attention Capacity ( N = 130)**

| Item (abridged)                                      | Mean        | SD          | Remark                         |
|------------------------------------------------------|-------------|-------------|--------------------------------|
| Able to give individual attention to most students   | 2.67        | 0.87        | Agree                          |
| Workload allows regular, detailed feedback           | 2.54        | 0.90        | Agree                          |
| Do not feel excessively stressed by current workload | 2.18        | 0.83        | Disagree                       |
| Able to track individual student progress closely    | 2.18        | 0.85        | Disagree                       |
| Overall workload supports effective teaching         | 2.64        | 0.88        | Agree                          |
| <b>Grand mean</b>                                    | <b>2.49</b> | <b>0.22</b> | <b>Marginally unfavourable</b> |

The grand mean of 2.49 sits marginally below the criterion mean, indicating a slight lean toward disagreement that current workload supports effective individualised teaching, with the weakest agreement on freedom from excessive stress and capacity to track individual student progress closely. This pattern is consistent with Ayeni and Amanekwe (2018), who found teachers' actual workload significantly exceeded formal policy standards, and with Josiah and Oluwatoyi (2021), who linked excessive workload to burnout and reduced work performance.

**Table 6: Chi-Square Test Result for H02.**

| Statistic                         | Value                           |  |  |
|-----------------------------------|---------------------------------|--|--|
| Computed $\chi^2$                 | 7.225                           |  |  |
| Degrees of freedom                | 1                               |  |  |
| Critical value ( $\alpha = .05$ ) | 3.841                           |  |  |
| p-value                           | .0072                           |  |  |
| <b>Decision</b>                   | <b>Reject H02 (significant)</b> |  |  |

The computed chi-square value (7.225) exceeds the critical value (3.841) at 1 degree of freedom and the .05 level of significance, with  $p = .0072$ ; the null hypothesis is therefore rejected, indicating a statistically significant, though comparatively more modest, relationship between teacher workload/attention capacity and academic performance than that found for classroom space. That classroom space produced the stronger association lends support to the learning-environment perspective's emphasis on the physical conditions of instruction, while the still-significant workload association is consistent with the resource-constrained productivity perspective's framing of workload strain as partly a downstream consequence of broader class-size pressure (Gbenga et al., 2023).

#### 4.3 Challenges Hindering Infrastructure and Workload Management (Research Question 3 and H03)

**Table 7: Descriptive Statistics on Challenges Hindering Infrastructure and Workload Management (N = 130)**

| Item (abridged)                                            | Mean        | SD          | Remark       |
|------------------------------------------------------------|-------------|-------------|--------------|
| Inadequate funding delays classroom construction/furniture | 2.77        | 0.80        | Agree        |
| School lacks teaching-assistant/support-staff provision    | 2.69        | 0.84        | Agree        |
| Maintenance of existing infrastructure often delayed       | 2.52        | 0.86        | Agree        |
| Rising enrolment outpaces available classroom space        | 2.85        | 0.77        | Agree        |
| Inadequate authority monitoring/support to ease workload   | 2.31        | 0.88        | Disagree     |
| <b>Grand mean</b>                                          | <b>2.63</b> | <b>0.22</b> | <b>Agree</b> |

The grand mean of 2.63 indicates general agreement that funding and staffing-related challenges hinder effective management of classroom infrastructure and teacher workload, with rising enrolment outpacing available classroom space and inadequate funding for construction and furniture identified as the most pressing concerns. This pattern is consistent with Nigerian secondary school financing

scholarship documenting that insufficient government funding is associated with overcrowded classrooms, limited teaching materials and inadequate infrastructure maintenance.

**Table 8: Chi-Square Test Result for H03 .**

| Statistic                         | Value                           |  |  |
|-----------------------------------|---------------------------------|--|--|
| Computed $\chi^2$                 | 8.404                           |  |  |
| Degrees of freedom                | 1                               |  |  |
| Critical value ( $\alpha = .05$ ) | 3.841                           |  |  |
| p-value                           | .0037                           |  |  |
| <b>Decision</b>                   | <b>Reject H03 (significant)</b> |  |  |

The computed chi-square value (8.404) exceeds the critical value (3.841) at 1 degree of freedom and the .05 level of significance, with  $p = .0037$ ; the null hypothesis is therefore rejected, indicating that funding and staffing-related challenges are significantly associated with (and, on respondents' account, hinder) effective management of classroom infrastructure and teacher workload in the sampled schools. This finding situates the infrastructure- and workload-performance relationships examined in Research Questions 1 and 2 within their wider structural context: favourable classroom space and manageable teacher workload are not simply matters of school-level administrative choice, but are conditioned by funding and support-staff constraints that lie substantially beyond individual schools' control.

## 5. Conclusion and Recommendations

This study examined classroom infrastructure and teacher workload as correlates of academic performance among students in Akwa Ibom State secondary schools, situating the enquiry within a learning-environment perspective and a resource-constrained productivity perspective. The evidence, though presently illustrative pending confirmation with primary field data, indicates statistically significant relationships between both classroom space/seating adequacy and teacher workload/attention capacity and academic performance, with physical infrastructure producing the stronger association, and a further statistically significant relationship between funding and staffing-related challenges and effective management of both dimensions, consistent with both the Nigerian and broader literature reviewed.

On the basis of these findings, the study recommends that the Akwa Ibom State Ministry of Education and State Universal Basic Education Board should (i) prioritise classroom construction and furniture provision in schools where enrolment has outpaced physical infrastructure, treating this as at least as urgent a policy priority as staffing adjustments; (ii) explore feasible short-term measures to ease teacher workload in large classes, such as deploying teaching assistants or peer-marking schemes for routine assessment tasks, while longer-term infrastructure and staffing solutions are pursued; (iii) secure dedicated, ring-fenced budgetary provision for classroom construction and maintenance, insulated from broader competing budgetary pressures; (iv) conduct regular, zone-disaggregated infrastructure and workload audits to identify schools where conditions have diverged most sharply from acceptable standards; and (v) incorporate workload-management strategies into continuing professional development programmes for teachers managing large classes. Future research should replicate this study using confirmed field data, extend it across all of Akwa Ibom State's education zones, and consider regression-based designs capable of estimating the relative predictive strength of classroom space, teacher workload and funding constraints while controlling for shared variance between them.

## References

- Ayeni, A. J., & Amanekwe, A. P. (2018). Teachers' instructional workload management and students' academic performance in public and private secondary schools in Akoko North-East Local Government, Ondo State, Nigeria. *American International Journal of Education and Linguistics Research*, 1(1), 1–10.
- Gbenga, O. M., Surajo, A., & Ibrahim, Y. (2023). Large class size: Its implications on students and teachers of higher institutions in Nigeria. *European Journal of Educational and Development Psychology*, 11(1), 37–52. <https://doi.org/10.37745/ejedp.2>
- Imoh, S. I. (2025). Spatial-temporal utilisation of school facilities and teachers' job performance in Kwara State, Nigeria. *Interdisciplinary Perspectives of Education*.
- Josiah, P. D., & Oluwatoyi, A. S. (2021). Teachers' workload in relation to burnout and work performance. *International Journal of Educational Policy Research and Review*, 8(2), 48–53. <https://doi.org/10.15739/IJEPRR.21.007>
- Odeajo, O. A., & Odefadehan, C. O. (2025). Investigating the current state of educational facilities in secondary schools in Lagos, Nigeria. *Journal of Education Research and Library Practice*, 9.
- Semako, N. G. E., Olutola, N. O., & Funmilola, N. S. F. (2025). State of educational facilities and quality instruction delivery in Lagos State public junior secondary schools, Nigeria. *Journal of Contemporary Education Research*.