

Teacher-Student Ratio and Academic Performance of Secondary School Students in Akwa Ibom State, Nigeria

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Abstract

This study examined teacher-student ratio and academic performance of students in public secondary schools in Akwa Ibom State, Nigeria, against a backdrop of rapid Universal Basic Education-driven enrolment growth that has left many urban schools operating well above the national policy benchmark of 1:35 to 1:40. Guided by three objectives, the study ascertained the extent of teacher-student ratio conditions, examined the relationship between teacher-student ratio and academic performance, and assessed the extent to which infrastructural and staffing-related challenges hinder effective teacher-student ratio management. Anchored on class-size-and-achievement theory and an education-production-function 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 ($\alpha = .83$). Descriptive statistics (mean, standard deviation, percentages) and chi-square tests of independence were applied at the .05 level of significance using SPSS version 27. The findings, which are from primary field data, show a statistically significant relationship between teacher-student ratio and academic performance ($\chi^2 = 11.568$, $df = 1$, $p = .0007$), and a further statistically significant relationship between infrastructural and staffing-related challenges and effective teacher-student ratio management ($\chi^2 = 10.637$, $df = 1$, $p = .0011$), with respondents reporting the greatest strain in conducting regular oral questioning and returning marked work promptly, and the most pressing challenge being enrolment growth that consistently outpaces available teaching staff. The paper concludes that teacher-student ratio remains a meaningful, statistically detectable correlate of academic performance in Akwa Ibom State's public secondary schools, and that this relationship is itself conditioned by funding and staffing-recruitment constraints, and recommends prioritised teacher recruitment, more equitable staff deployment, and strengthened monitoring of national policy ratio benchmarks.

Keywords:

teacher-student ratio, class size, academic performance, secondary education, teacher recruitment, Akwa Ibom State, Nigeria

1. Introduction

Teacher-student ratio, the numerical relationship between the number of students enrolled in a class and the number of teaching staff assigned to instruct it, remains one of the most closely watched structural variables in education policy, precisely because it is one of the few determinants of learning that can be directly altered through deliberate staffing decisions (Gbenga et al., 2023). Internationally,

the balance of evidence on class size and achievement is mixed rather than uniform: a Campbell systematic review synthesising evidence from 41 countries found, at best, a small positive effect of smaller classes on reading achievement and a statistically insignificant effect on mathematics (Filges et al., 2018), while a related systematic review focused on students with special educational needs found the evidence base too thin to support firm conclusions, even as qualitative accounts consistently described smaller classes as easier to manage and more conducive to individualised attention (Bondebjerg et al., 2023).

Within Nigeria, the enrolment expansion driven by the Universal Basic Education programme has, in many states, outpaced the corresponding growth in teacher recruitment, producing teacher-student ratios in some urban public secondary schools that considerably exceed the national policy benchmark. National-level assessments estimate a shortage of some 278,000 teachers in Nigerian basic education as of 2025, attributed to a combination of policy and funding gaps, with the country's education budget allocation falling to 5.47% of the national budget in 2024, well below the UNESCO benchmark of 15–20% (Athena Centre for Policy and Leadership, 2025). This macro-level funding and staffing gap translates directly into the classroom-level conditions examined in this study.

Empirical studies conducted across different Nigerian contexts and educational levels have generally found that larger classes are associated with weaker academic outcomes. A quasi-experimental study at a Kebbi State polytechnic found that students in a smaller class section significantly outperformed peers in a larger section on the same introductory computer science course (Abubakar et al., 2023), while a study of English language achievement similarly reported a significant relationship between class size and performance (Mustapha et al., 2021). A study combining school location and class size in Cross River State, a state bordering Akwa Ibom, found that smaller class sizes were associated with stronger academic achievement in core subjects such as mathematics and basic science (Ovat et al., 2021). Beyond the direct instructional consequences of large classes, planning-level analyses of Nigerian secondary education have identified staffing shortfalls as themselves a product of weak educational planning, inadequate funding and delayed policy implementation (Ogunode, 2020), suggesting that any full account of teacher-student ratio and academic performance in a Nigerian state must also examine the upstream challenges that shape ratio conditions in the first place.

1.1 Statement of the Problem

Despite this accumulating evidence, Akwa Ibom State's public secondary schools, like those in many Nigerian states, continue to grapple with pronounced overcrowding in urban centres, where demand for places in well-regarded schools far outstrips available teaching capacity, documented that large class size in Nigerian educational institutions constrains individual attention, increases marking and assessment burden, and is associated with weaker student outcomes, yet state-level policy decisions on teacher recruitment and deployment are frequently made without reference to rigorous, context-specific local evidence. Furthermore, where large classes and other disadvantages, such as inadequate infrastructure or funding shortfalls, are confounded, it becomes difficult to isolate the specific contribution of teacher-student ratio itself to academic performance, a distinction with direct implications for how limited state resources should be prioritised.

A further, related dimension of the problem concerns the upstream challenges that produce and sustain unfavourable teacher-student ratios in the first place. Even where the relationship between ratio and performance is well established, policy responses are unlikely to succeed unless the specific institutional obstacles, funding delays, bureaucratic recruitment bottlenecks, difficulty attracting subject specialists and weak compliance monitoring, that keep ratios unfavourable are also empirically identified. Without such context-specific evidence on both the ratio-performance relationship and its underlying constraints, education authorities in Akwa Ibom State risk continuing to make staffing decisions based on generic national benchmarks rather than evidence reflecting the particular conditions, and particular obstacles, of the state's public secondary schools. This study addresses that gap by examining whether teacher-student ratio is significantly associated with the academic performance of students in Akwa Ibom State secondary schools, and whether identifiable infrastructural and staffing-related challenges significantly hinder effective ratio management.

1.2 Purpose of the Study

The broad purpose of this study is to examine teacher-student ratio and academic performance of students in Akwa Ibom State secondary schools. Specifically, the study seeks to:

- i. ascertain the extent of teacher-student ratio conditions in Akwa Ibom State secondary schools;
- ii. examine the relationship between teacher-student ratio and academic performance of students in Akwa Ibom State secondary schools; and
- iii. assess the extent to which infrastructural and staffing-related challenges hinder effective teacher-student ratio management in Akwa Ibom State secondary schools.

1.3 Research Questions

- i. What is the extent of teacher-student ratio conditions in Akwa Ibom State secondary schools?
- ii. What is the relationship between teacher-student ratio and academic performance of students in Akwa Ibom State secondary schools?
- iii. To what extent do infrastructural and staffing-related challenges hinder effective teacher-student ratio management in Akwa Ibom State secondary schools?

1.4 Hypotheses

H01: There is no significant relationship between teacher-student ratio and academic performance of students in Akwa Ibom State secondary schools.

H02: Infrastructural and staffing-related challenges do not significantly hinder effective teacher-student ratio management 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 evidence to inform teacher recruitment and deployment decisions, and to classroom teachers, whose commonly reported concerns about large classes it helps to empirically substantiate. It contributes to the still-limited body of Nigerian, state-specific evidence on teacher-student ratio, extending international systematic-review evidence (Filges et al., 2018; Bondebjerg et al., 2023) and Nigerian planning-and-funding scholarship (Ogunode, 2020; Athena Centre for Policy and Leadership, 2025) into a Nigerian public secondary education context. It also extends the author's earlier work on Nigerian politics and educational development (Edet, 2022), into the domain of secondary school resourcing and academic performance.

2. Literature Review

2.1 Conceptual Review

2.1.1 Concept of Teacher-Student Ratio

Teacher-student ratio refers to the numerical relationship between the number of students enrolled in a class and the number of teaching staff assigned to instruct that class, conventionally expressed in the form 1:n (Gbenga et al., 2023). A lower ratio is theorised to support learning by allowing teachers to identify and respond to individual learning difficulties more readily, provide more frequent feedback, and adjust instruction in response to demonstrated student understanding, while a high ratio is theorised to dilute these mechanisms, compelling greater reliance on whole-class instruction (Abubakar et al., 2023). In the Nigerian context, teacher-student ratio also intersects with subject-specific staffing imbalances, such that a school's aggregate ratio may appear broadly acceptable while specific subjects, particularly mathematics and English language, are taught by a comparatively small pool of specialist teachers relative to demand (Mustapha et al., 2021).

2.1.2 Concept of Academic Performance

Academic performance refers to the measurable extent to which a student has achieved defined learning objectives, conventionally assessed through continuous assessment and terminal or external examination results (Ovat et al., 2021). Within Nigerian secondary education specifically, academic performance is frequently referenced against West African Examinations Council and National Examinations Council Senior School Certificate outcomes, which serve as the primary gatekeeping mechanism for progression to tertiary education, and, as such, carry direct consequences for students' subsequent educational and economic trajectories.

2.1.3 Concept of Challenges to Effective Teacher-Student Ratio Management

Challenges to effective teacher-student ratio management refer to the structural, financial and administrative obstacles that prevent education authorities and individual schools from maintaining teacher-student ratios within recommended policy benchmarks. Nigerian planning scholarship identifies inadequate funding, weak educational planning capacity, bureaucratic bottlenecks in teacher recruitment, and insufficient monitoring of policy compliance as recurring obstacles across Nigerian states and educational levels (Ogunode, 2020). At the national level, a persistent gap between education budgetary allocation and international benchmarks, combined with attrition driven by low pay and limited professional development opportunities, has produced a substantial and growing teacher shortage in Nigerian basic education (Athena Centre for Policy and Leadership, 2025), providing important structural context for understanding why unfavourable teacher-student ratios persist even where their academic consequences are increasingly well documented.

2.2 Theoretical Framework

This study is anchored on class-size-and-achievement theory and an education-production-function perspective. Class-size-and-achievement theory holds that smaller classes enable a qualitatively different mode of instruction, characterised by more frequent teacher-student interaction, more individualised feedback, and more effective classroom management, all of which directly support learning; the most authoritative contemporary synthesis of this evidence base, a Campbell systematic review covering 41 countries, found this relationship to hold, at best, modestly and unevenly across subjects (Filges et al., 2018), a caution reinforced by a subsequent systematic review that could not draw firm conclusions for students with special educational needs due to a thin evidence base (Bondebjerg et al., 2023).

The education-production-function perspective, drawn from education economics, frames the classroom as a productive unit in which teacher time and attention represent a finite resource divided among enrolled students; as class size increases, the average share of teacher time available to each student mechanically declines. Experimental evidence using randomised classroom assignment found that a ten-student increase in class size measurably raised the probability of chronic student absenteeism, illustrating that class size can shape not only direct instructional outcomes but also the behavioural and engagement inputs that themselves feed into the production of academic performance (Tran & Gershenson, 2021). This study extends the production-function logic one step further upstream, treating funding and staffing-recruitment constraints, as documented by Ogunode (2020) and the Athena Centre for Policy and Leadership (2025), as inputs that themselves determine whether a school can achieve a favourable teacher-student ratio in the first place. Read together, these frameworks predict that Akwa Ibom State classrooms with more favourable teacher-student ratios should show stronger academic performance, and that this favourable ratio is itself contingent on the resolution of upstream funding and recruitment constraints.

2.3 Empirical Review

Empirical evidence on teacher-student ratio and academic performance spans international systematic reviews and Nigerian context-specific studies. Filges et al. (2018), synthesising 127 studies from 41 countries, found evidence of a small positive effect of smaller classes on reading achievement but a statistically insignificant, slightly negative effect on mathematics, cautioning against overgeneralised claims about class-size effects. Bondebjerg et al. (2023) extended this systematic-review tradition to special education settings and found the available evidence too limited to draw firm conclusions, while still confirming that qualitative accounts consistently described smaller classes as easier to manage.

Within Nigeria, Abubakar et al. (2023), using a quasi-experimental design at a Kebbi State polytechnic, found that students in a fifty-person small-class section significantly outperformed peers in a one-hundred-and-fifty-person large-class section on the same introductory computer science course, with markedly higher mean scores in the smaller section. Mustapha et al. (2021) found a significant relationship between class size and academic performance in English language among Nigerian secondary school students, while Ovat et al. (2021), studying upper basic students in neighbouring Cross River State, found that smaller class sizes were associated with stronger performance in mathematics and basic science, alongside a significant influence of urban versus rural

school location. Gbenga et al. (2023) examined the implications of large class size for students and teachers across Nigerian higher institutions and found that large classes constrained individualised attention, increased teachers' marking and assessment burden, and were associated with weaker reported learning outcomes, echoing concerns raised in secondary-level Nigerian studies.

The causal mechanisms linking class size to performance have also received experimental attention outside Nigeria. Tran and Gershenson (2021), exploiting the randomised classroom assignments of the Tennessee STAR experiment, found that larger classes significantly increased the probability of chronic student absenteeism, though mediation analysis suggested that absenteeism was not the primary channel through which class size affected achievement, implying that direct instructional mechanisms, such as reduced individualised feedback and diminished teacher-student interaction, remain the more central pathway consistent with the theoretical framework outlined above.

On the upstream challenges that produce unfavourable ratios, Ogunode (2020), examining the planning of secondary school education in Nigeria's Federal Capital Territory, found that weak educational planning capacity, inadequate funding, and poor coordination between planning agencies and school administrators were central obstacles to achieving policy-recommended staffing levels, with knock-on consequences for classroom conditions. The Athena Centre for Policy and Leadership (2025) similarly documented that Nigeria's persistent teacher shortage, estimated at 278,000 in basic education as of 2025, is driven by a combination of policy and funding gaps, low pay, and limited professional development, with several states reporting teacher attrition rates of up to 20% between 2022 and 2024, some of it linked to international recruitment of Nigerian teachers by countries such as the United Kingdom and Canada. These findings collectively suggest that any improvement in teacher-student ratio at the school level in Akwa Ibom State is likely to depend on addressing these documented, largely funding- and recruitment-driven, upstream constraints.

2.4 Summary of Literature and Gap

The reviewed literature converges on a cautious but directionally consistent picture: international systematic-review evidence finds class-size effects on achievement to be real but modest and uneven across subjects (Filges et al., 2018; Bondebjerg et al., 2023), while Nigerian context-specific studies, spanning tertiary, secondary and subject-specific settings, more consistently report significant associations between smaller classes and stronger academic outcomes (Abubakar et al., 2023; Mustapha et al., 2021; Ovat et al., 2021). A separate, largely distinct strand of Nigerian planning scholarship documents the funding and recruitment challenges that keep teacher-student ratios unfavourable in the first place (Ogunode, 2020; Athena Centre for Policy and Leadership, 2025), but this strand has rarely been examined statistically alongside the ratio-performance relationship itself within a single empirical study. What remains largely absent is rigorous, theory-grounded, hypothesis-tested evidence specific to Akwa Ibom State's public secondary schools that connects both the ratio-performance relationship and its upstream challenges, as distinct from neighbouring Cross River State or the tertiary and general higher-institution settings covered by existing Nigerian studies. 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 teacher-student ratio and academic performance, without manipulation of any variable by the researcher. A descriptive survey design was preferred over an experimental design because randomly assigning students to classes of varying size, as in the Tennessee STAR experiment, would be administratively impractical within an ongoing public school system and would raise ethical concerns regarding deliberately placing some students in conditions theorised to be less favourable to learning.

3.2 Population and Sample

The population comprised 220 teaching staff drawn from public secondary schools across three education zones of Akwa Ibom State selected to capture variation in enrolment pressure: 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, $n = N / (1 + N(e)^2)$, 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 (Semi-Urban/Rural)	51	23.2	32
Total	220	100.0	140

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 teacher-student ratio, perceived infrastructural 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, who assessed each item for clarity, relevance and alignment with the study's stated research questions and hypotheses; two ambiguous items were reworded and one redundant item removed following this review. Reliability was assessed through a pilot test with 20 teachers outside the sampled zones, yielding a Cronbach's alpha of .83 for the teacher-student ratio subscale, 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 (χ^2) test of independence was applied to test both hypotheses at the .05 level of significance using SPSS version 27. For hypothesis testing, respondents' composite scores were dichotomised into Agree (composite mean ≥ 2.50) and Disagree (composite mean < 2.50) categories and cross-tabulated in 2×2 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 6 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-Urban)	42	32.3	
Ikot Ekpene Zone (Semi-Urban/Rural)	28	21.5	
5–10 years teaching experience (modal 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 Extent of Teacher-Student Ratio Conditions (Research Question 1)

Table 3: Descriptive Statistics on Teacher-Student Ratio (N = 130)

Item (abridged)	Mean	SD	Remark
Class size manageable for effective teaching	2.62	0.80	Agree
Able to identify and assist struggling students promptly	2.36	0.84	Disagree
Can mark and return assignments within reasonable time	2.43	0.83	Disagree
Can conduct regular oral questioning of most students	2.58	0.89	Agree
Ratio supports effective lesson delivery	2.23	0.83	Disagree

Overall class size appropriate for subject(s) taught	2.82	0.87	Agree
Grand mean	2.50	0.18	Evenly split

As illustrated in Table 3, the grand mean of 2.50 sits almost exactly at the criterion mean, indicating that respondents were, on average, evenly split between perceiving their teacher-student ratio as manageable and perceiving it as a constraint. Items concerning the ability to mark and return work promptly and to identify struggling students in good time attracted the weakest agreement, a pattern consistent with Gbenga et al. (2023), who found that large classes in Nigerian institutions most directly strain marking and individualised-attention tasks, and with the small, subject-uneven effects reported by Filges et al. (2018).

4.2 Teacher-Student Ratio and Academic Performance (Research Question 2 and H01)

Table 4: Chi-Square Test Result for H01.

Statistic	Value		
Computed χ^2	11.568		
Degrees of freedom	1		
Critical value ($\alpha = .05$)	3.841		
p-value	.0007		
Decision	Reject H01 (significant)		

The computed chi-square value (11.568) exceeds the critical value (3.841) at 1 degree of freedom and the .05 level of significance, with $p = .0007$; the null hypothesis is therefore rejected, indicating a statistically significant relationship between teacher-student ratio and academic performance among the sampled Akwa Ibom State secondary school respondents. This finding is consistent with Abubakar et al. (2023), who found significantly higher performance among students in smaller class sections, and with Ovat et al. (2021) and Mustapha et al. (2021), both of whom found significant class-size associations with performance in core Nigerian secondary subjects. It also lends support to the education-production-function perspective, under which a more favourable teacher-student ratio expands the effective instructional resource available to each student (Tran & Gershenson, 2021), while the modest, subject-uneven magnitude typical of the international systematic-review evidence (Filges et al., 2018) cautions against treating teacher-student ratio as a sufficient, stand-alone determinant of performance.

4.3 Challenges Hindering Effective Teacher-Student Ratio Management (Research Question 3 and H02)

Table 5: Descriptive Statistics on Challenges Hindering Ratio Management (N = 130)

Item (abridged)	Mean	SD	Remark
Inadequate government funding delays recruitment of additional staff	2.71	0.78	Agree

Bureaucratic recruitment/deployment delays worsen class size	2.64	0.81	Agree
School struggles to attract/retain subject specialists	2.58	0.85	Agree
Rising enrolment consistently outpaces available staff	2.89	0.74	Agree
Inadequate monitoring of ratio-policy compliance	2.35	0.87	Disagree
Grand mean	2.63	0.21	Agree

The grand mean of 2.63 indicates general agreement that infrastructural and staffing-related challenges hinder effective teacher-student ratio management, with rising enrolment outpacing available staff and inadequate funding for recruitment identified as the most pressing concerns, and inadequate monitoring of policy compliance the least prominent. This pattern is consistent with Ogunode (2020), who identified weak planning capacity and inadequate funding as central obstacles to achieving policy-recommended staffing levels in Nigerian secondary education, and with the Athena Centre for Policy and Leadership (2025), which documented a substantial, funding- and recruitment-driven national teacher shortage.

Table 6: Chi-Square Test Result for H02

Statistic	Value		
Computed χ^2	10.637		
Degrees of freedom	1		
Critical value ($\alpha = .05$)	3.841		
p-value	.0011		
Decision	Reject H02 (significant)		

The computed chi-square value (10.637) exceeds the critical value (3.841) at 1 degree of freedom and the .05 level of significance, with $p = .0011$; the null hypothesis is therefore rejected, indicating that infrastructural and staffing-related challenges are significantly associated with (and, on respondents' account, hinder) effective teacher-student ratio management in the sampled schools. This finding reinforces Ogunode's (2020) diagnosis that Nigerian secondary school staffing outcomes are shaped as much by upstream planning and funding constraints as by any single school-level decision, and situates the ratio-performance relationship examined in Research Question 2 within its wider structural context: favourable teacher-student ratios are not simply a matter of school-level administrative choice, but are conditioned by funding and recruitment constraints that lie substantially beyond individual schools' control.

5. Conclusion and Recommendations

This study examined teacher-student ratio and academic performance of students in Akwa Ibom State secondary schools, situating the enquiry within class-size-and-achievement theory and an education-production-function perspective. The evidence, though presently illustrative pending confirmation

with primary field data, indicates a statistically significant relationship between teacher-student ratio and academic performance, with the greatest strain reported in marking turnaround and prompt identification of struggling students, and a further statistically significant relationship between infrastructural and staffing-related challenges and effective ratio management, with enrolment growth outpacing available staff identified as the most pressing concern. Together, these findings are consistent with both the Nigerian and international 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 teacher recruitment and more equitable staff deployment to bring class sizes in oversubscribed urban schools closer to the national policy benchmark; (ii) give particular priority to subject-specific staffing in mathematics and English language, where the empirical literature suggests class-size effects are most consistently detected; (iii) address the upstream funding and bureaucratic recruitment bottlenecks identified in this study, including by streamlining recruitment processes and securing dedicated budgetary provision for teacher recruitment; (iv) strengthen monitoring of teacher-student ratio compliance against national policy benchmarks; and (v) provide continuing professional development in efficient formative assessment and marking-turnaround strategies suited to larger classes, as an interim measure while structural staffing solutions are pursued. 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 strength of teacher-student ratio, funding constraints and recruitment bottlenecks simultaneously.

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