Access Without Retention: Free Senior Secondary Education and the Urban Public-School Retention Gap in Akwa Ibom State, Nigeria

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Abstract
Akwa Ibom State domesticated Nigeria's Child Rights Act in 2008 and, in 2009, extended free and compulsory education to senior secondary school, abolishing PTA levies, introducing per-pupil subventions, and assuming final examination fees. Fifteen years on, it remains unclear whether free access has translated into completion. Using a NEMIS school-census dataset covering 20,660 senior secondary schools and 1.61 million SS1 students across 34 state-level records, this study benchmarked national retention and conducted the first Local Government Area (LGA)-level evaluation of Akwa Ibom State (615 schools, 85,167 SS1 students). Nationally, attrition from SS1 to SS3 was 14.07%, concentrated in an 11.23% loss between SS2 and SS3. Akwa Ibom performed worse, with 17.8% attrition; the state capital, Uyo LGA, recorded the highest loss at 33.0% (10,388 to 6,959 students). Public schools retained 81.7% of students nationally compared with 98.7% for private schools, while rural schools retained 93.3% against 79.8% for urban schools. Within Akwa Ibom, public-sector enrollment fell by almost a third between SS1 and SS3 while private-sector enrollment rose over the same period, a pattern consistent with within-state transfer, though cross-sectional data cannot confirm this mechanism. The national gender parity index was 0.933 in SS1 and 0.927 in SS3. These results suggested that free-access policy in Akwa Ibom had succeeded in enrollment but not in completion at the SS2-SS3 transition, with implications for SDG 4.1 and the state's STEM workforce pipeline. The study proposed a senior secondary retention supplement combining SS2 early-warning monitoring, targeted support for high-loss LGAs, and an audit of urban public schools.

Keywords: Secondary education, school retention, Akwa Ibom State, Nigeria, NEMIS school census data, Sub-Saharan Africa, gender parity

Introduction
Nigeria's education crisis is often framed as an access problem, yet the system fails to retain a significant proportion of learners after children enter primary school. Digitisation of the annual school census through the Nigeria Education Management Information System (NEMIS) is

beginning to make that leakage visible at a level of detail that was previously unavailable to independent researchers. National estimates suggest that of the roughly 30 million children who enter primary school, only about 6 million reach senior secondary school, and UNICEF's most recent situation analysis puts the number of out-of-school children in Nigeria at 18.3 million, of whom 8.1 million are of secondary-school age (Ministry of Budget and Economic Planning [Federal Government of Nigeria] & UNICEF, 2024). Senior secondary school, the three years (SS1-SS3) that culminate in the West African Senior School Certificate Examination (WASSCE), is where much of this loss is concentrated, yet it remains the least studied segment of the Nigerian education system.

Akwa Ibom State presents an unusually strong test of whether removing fees is sufficient to solve this problem. The state domesticated the Child Rights Act in 2008 and, in 2009, extended free and compulsory education from primary and junior secondary to senior secondary school, abolishing Parent-Teacher Association (PTA) levies, introducing per-pupil subventions, and assuming payment of WASSCE and other final examination fees (Akpan et al., 2025; Akwa Ibom State Government, 2008; Mboho & Nkob, 2023). This places Akwa Ibom among the most generous sub-national free-education regimes in Nigeria, and the policy has persisted, with varying degrees of funding intensity, across three successive administrations for a decade and a half.

Despite this investment, no known study has evaluated senior secondary school retention in Akwa Ibom at the Local Government Area (LGA) level using school-level NEMIS data. Existing Akwa Ibom-focused research has examined dropout inclination through individual-level psychosocial surveys (Sakirudeen & Akinloye, 2020) rather than system-level administrative counts, and national dropout studies have generally stopped at junior secondary or examined out-of-school children through household survey data rather than school census returns (Bassey, 2026; Ibor et al., 2024; Nwoke et al., 2024).

This paper asks three questions:

1. Does free senior secondary education in Akwa Ibom translate into completion, or only into enrollment?
2. Where does the pipeline leak, and is the leakage evenly spread across the state's 31 LGAs?
3. Does the pattern of loss differ by school sector (public/private) and location (urban/rural) in ways that point to a specific mechanism rather than generic attrition?

The newly available NEMIS-derived extract from the Federal Ministry of Education's Digital National Education Management Information System (DNEMIS), Federal Ministry of Education (2024), was used. DNEMIS is a DHIS2-based national platform that replaces a paper-based annual school census, bringing school, learner, teacher and infrastructure data onto one national system across all 36 states, the FCT and 774 local government areas, with around 222,000 schools and more than 39 million learners, and collects school-level data across states and local government areas, including the number of public and private schools at primary and secondary levels, Anyanwu (2026). From this, we derived a cleaned analytic file of 20,660 senior secondary schools across 34 state-level records covering 1.61 million SS1 students to benchmark national patterns. We zoom into Akwa Ibom State (615 schools, 85,167 SS1 students) for the first LGA-level analysis of its kind using this source. The contribution is fourfold: the first quantitative estimate of SS1-SS3 attrition in Akwa Ibom using administrative school-census data; LGA-level hotspot mapping that identifies where the state's retention challenge is concentrated; new evidence, at the sub-national level, that the urban retention gap is associated with a shift of students from the public to the private sector rather than uniform withdrawal from school, though cross-sectional data cannot definitively establish this mechanism; and a transparent account of the data-quality issues in the underlying NEMIS extract, offered as a contribution to Nigeria's education data infrastructure in its own right.

Literature Review

Free Secondary Education in Sub-Saharan Africa: Access Achieved, Completion Contested

Fee-free secondary education has been one of the most consequential education policy experiments in Sub-Saharan Africa over the past two decades. Ghana's Free Senior High School (Free SHS) policy, introduced in the 2017/2018 academic year, is the most studied case. Using a difference-in-differences design across 261 districts, Stenzel et al. (2024) found that free SHS raised girls' completion rates by roughly 14 percentage points in high-uptake districts and by 14.9 percentage points overall, offering credible causal evidence that fee abolition can move completion, not just enrollment. Yet qualitative and mixed-method evaluations complicate this picture: Casely-Hayford et al. (2025) found that free SHS improved access, particularly for low-income and rural households, but also drew in academically unprepared students and strained already scarce resources, with some stakeholders reporting reduced student motivation once fees were removed. Agana et al. (2025), Ameko et al. (2025), Dzikunu and Ansah (2025), and Mohammed and Kuyini (2021) link the double-track scheduling system introduced to manage the resulting enrollment surge to a measurable decline in academic performance. Adarkwah (2022) and Dzikunu and Ansah (2025) frame these tensions as a policy-process failure: Ghana emphasised the political and programmatic dimensions of free SHS while neglecting agenda-setting and implementation planning, producing funding shortfalls, textbook scarcity, and infrastructure strain. To summarise, the Ghanaian literature suggests that access gains from fee abolition are real but that completion and quality require deliberate, separately funded interventions—precisely the gap this paper documents for Akwa Ibom.

A parallel, continent-wide test comes from Martin et al. (2025), who examine the combined effect of free and compulsory lower-secondary education across Sub-Saharan Africa and found that pairing fee abolition with a compulsory-attendance mandate, the same combination Akwa Ibom adopted through its Child Rights Law, produces larger attainment gains than fee removal alone, though gains vary considerably by country context.

Kenya and Uganda: Subsidy Necessary but not Sufficient

Kenya's Free Day Secondary Education policy (introduced 2008) and Uganda's Universal Secondary Education (USE) policy (introduced 2007) offer a longer track record. County-level Kenyan studies generally report a positive association between subsidy levels and retention (Achieng & Nduku, 2021), but a cohort-based survival analysis in Kericho County found that the fee-free policy explained only about 10.5% of the variation in student survival rates, implying that most of the variation in whether a student reaches the terminal year is driven by factors the subsidy does not touch (Ngeno, 2025). In Uganda, Kakuba et al. (2021) show, using national census data, that only 22% of children aged 13–18 were enrolled in secondary school under USE, and that household socio-economic status continued to moderate access at every rung of the education ladder—a finding that anticipates the sector-based inequality this paper documents in Akwa Ibom State. Earlier work by Omoeva and Gale (2016) had already warned that USE was “universal but not free”: households continued to bear indirect costs (uniforms, meals, transport, informal levies) that fee abolition did not remove, a mechanism plausibly at work in Akwa Ibom's own urban attrition pattern. More recent quasi-experimental work finds that USE nonetheless produced durable gains in women's educational attainment and delayed marriage and childbearing where the policy was implemented most intensively (Bassey & Ataguba, 2026; Kazibwe & Li, 2025), emphasising that subsidy policies can succeed on some outcomes (access, long-run attainment) while still leaking students at specific transition points, as this article finds for the SS2–SS3 juncture.

Nigeria: An Under-Documented Senior Secondary Bottleneck

Nigerian dropout research has concentrated overwhelmingly on primary and junior secondary levels and on household- or individual-level correlations with peer influence, family structure, insecurity, and early marriage, rather than on system-level administrative counts at senior secondary. Ibor et al. (2024) used National Bureau of Statistics data to map girl-child dropout geographically across Nigeria's 36 states and found that insecurity and household wealth jointly explained 64% of the variation in dropout, with the sharpest concentration in northern Nigeria; their spatial approach was instructive but, like most national studies, did not disaggregate secondary school by SS1–SS3 progression. Nwoke et al. (2024) synthesised the broader out-of-school-children literature and identified unemployment, insecurity, and weak public expenditure tracking as recurring structural drivers. Within Akwa Ibom specifically, Sakirudeen and Akinloye (2020) surveyed SS2 students directly and found that examination pressure, school rules, and teacher-student relationships significantly predicted dropout inclination—a psychosocial account that is consistent with, but cannot on its own explain, the scale of the administrative attrition this paper documents.

Urban-Rural and Public-Private Divides

A growing body of Nigerian evidence complicates the intuitive assumption that private schooling is simply better than public schooling. Using nationally representative household expenditure data, Ekundayo (2015), Härmä (2013), and Obiakor (2025) show that private-school enrollment is highest precisely where public-school supply is weakest, and that low-cost private schools are least accessible to the poorest households, a school-choice-under-excess-demand dynamic that can just as easily describe families exiting an overcrowded urban public school as it can describe deliberate quality-seeking. Baum et al. (2018) reach a related conclusion for Lagos, where higher-cost private schools provide disproportionately better progression opportunities to wealthier households, reinforcing rather than closing pre-existing inequality. These findings are directly relevant to the urban retention paradox this paper documents in Uyo, where public-sector SS1 enrollment substantially exceeds SS3 enrollment while private-sector enrollment rises over the same period.

Data Infrastructure as a Policy Variable

Finally, the credibility of any NEMIS-based analysis depends on the quality of the underlying data infrastructure. El Mazbouh et al. (2025) argue, from a comparative review of EMIS implementation across development contexts, that education management information systems routinely capture large volumes of data without a corresponding capacity or, they argue, institutional incentive to use it, so that "the data dies" before it reaches decision-makers. Nigeria's own experience mirrors this pattern: Ezeugbor et al. (2016) found incomplete and inconsistently available school records constraining NEMIS implementation in Anambra State a decade ago, and the missing-state and inconsistent-entry problems documented in the data quality section below suggest the constraint persists at the national level. Treating data quality as a substantive finding, rather than a footnote, is therefore itself a contribution to the literature on education data infrastructure in Nigeria and Sub-Saharan Africa more broadly.

Data and Methods

Data Source and Variable Construction

The primary data source is the Federal Ministry of Education (2024) NEMIS/D-NEMIS annual school census extract, which records senior secondary enrollment by grade (SS1, SS2, SS3), gender, sector (public/private), and location (urban/rural) for individual schools. The national extract used here contains 20,660 schools and 14 fields. For each school, we constructed:

SS1_TOT = SS1_MALE + SS1_FEMALE
SS3_TOT = SS3_MALE + SS3_FEMALE
DROP = (SS1_TOT - SS3_TOT) ÷ SS1_TOT × 100
RETENTION = SS3_TOT ÷ SS1_TOT × 100
The gender parity index (GPI = FEMALE ÷ MALE), calculated separately for SS1 and SS3.

For Akwa Ibom State, the same construction was applied to a dedicated extract of 615 schools nested within 31 LGAs.

Because SS1, SS2, and SS3 enrolments are recorded within a single academic year, retention as calculated here is a cross-sectional (synthetic-cohort) measure: it compares the current SS3 class with the current SS1 class as a proxy for the progression of an actual cohort three years earlier, following the standard grade-survival methodology used in UNESCO Institute for Statistics reporting. It is not a longitudinal tracking of the same students and cannot distinguish repetition, inter-school transfer, inter-state migration, or true withdrawal from school as separate components of the measured "attrition." This distinction matters directly for interpreting the sector-level results.

Data Quality, Missing Records, and Cleaning Steps

Three categories of data-quality issues were identified and are reported here as a methodological contribution rather than concealed through silent correction:

i. **Duplicate and Inconsistent Naming:** The raw STATE field contains two distinct string values for Kwara State, one exact match and one carrying trailing whitespace, which most spreadsheet and statistical software treat as two separate states unless explicitly cleaned; we merged these before any state-level aggregation. A parallel and more consequential issue affects the Akwa Ibom LGA field: ten of the state's 31 constitutionally recognised LGAs appear as split records under alternate spelling or hyphenation conventions in the raw extract (for example, "Ikot-Abasi" and "Ikot Abasi"; "Ibesikpo-Asutan" and "Ibesikpo Asutan"; "Nsit-Ubium" and "Nsit Ubium"; "Mkpat-Enin" and the misspelt variant "Mpat Enein"). Left unmerged, this naming inconsistency would inflate Akwa Ibom's LGA count to 32 and would understate the true school and enrollment totals for the affected LGAs. LGA names were normalised (removing case, spacing, and hyphenation differences) and split records were merged before computing LGA-level rankings; this reconciliation changed the internal ranking of several mid-tier LGAs relative to a naive read of the raw file (most notably Essien-Udim, whose dropout rate rose from a partial-record 31.4% to a full-record 28.7% once its six additional schools were correctly attributed) but left a the state-level totals (615 schools; 85,167 SS1; 70,025 SS3) unchanged, since these totals sum correctly regardless of how records are grouped by name. Table 2 reports the corrected LGA ranking.

ii. **Field-name Irregularities:** The raw NEMIS column headers contain internal inconsistencies (for example, SS1_TOTAL and LOCATION with a trailing space) that do not affect the analysis once standardised but are noted here because they are symptomatic of the wider data-governance gap documented by El Mazbouh et al. (2025) and Ezeugbor et al. (2016): a national administrative dataset of this scale currently has no automated field-validation layer between school-level entry and public release.

Analytical Approach

The analysis is descriptive and exploratory, not inferential. We report attrition and retention rates, cross-tabulate by sector and location, and rank LGAs by dropout rate. Because the data represent a single-year cross-sectional snapshot rather than a panel, we do not estimate regression models or claim causal identification; where the discussion draws on causally

identified estimates from the literature (for example, Kazibwe & Li, 2025; Stenzel et al., 2024), these are presented explicitly as external evidence rather than as results of the present analysis. Data cleaning was conducted in Python (pandas); all percentages reported in the results are computed from the cleaned, merged extracts described above. We conducted a sensitivity analysis by re-running the LGA-level analysis without merging split-name records; the main findings (Uyo as the highest-loss LGA, the public-private retention gap) remained robust to this alternative specification, though several mid-tier LGAs shifted in rank.

Ethical Considerations

The dataset consists of school-level, not student-level, administrative counts and contains no personal identifiers. All LGA- and state-level reporting in this paper aggregates across schools, preserving the anonymity of individual institutions and students.

Results

National Pattern

Across the 33 states with usable SS1-SS3 data, total SS1 enrollment is 1,612,982; SS2 enrollment is 1,561,307, a 3.2% loss from SS1; and SS3 enrollment is 1,386,022, an 11.23% loss from SS2. The cumulative SS1-SS3 loss is 14.07%, confirming that the SS2–SS3 transition, immediately preceding WASSCE, is the dominant leakage point nationally (see Table 1).

Table 1: **National Retention by Sector and Location**

Category	Schools	SS1	Retention SS1–SS3
Public	8,102	1,178,093	81.7%
Private	12,355	398,281	98.7%
Rural	10,925	726,244	93.3%
Urban	9,676	884,567	79.8%

Note: Schools coded “Science and Vocational” or with indeterminate sector/location codes are excluded from this table but included in national totals.

The national gender parity index is 0.933 in SS1 and 0.927 in SS3, close to parity but showing a slight net widening of the male advantage by SS3, with considerably more variation once the analysis is disaggregated to LGA level. These GPI values suggest that gender disparities, while present, are not the primary driver of the retention problem documented in this paper; the attrition is broadly shared across genders.

Akwa Ibom State

Akwa Ibom recorded 85,167 SS1 students across 615 schools, falling to approximately 78,749 in SS2 and 70,025 by SS3, an overall attrition of 17.8%, exceeding the 14.07% national benchmark by nearly four percentage points. Table 2 reports the cleaned, name-merged LGA ranking described in Table 1.

Table 2: Top 10 LGAs by SS1–SS3 Dropout Rate, Akwa Ibom State (cleaned and merged)

LGA	Schools	SS1	SS3	Dropout %
Uyo	64	10,388	6,959	33.0%
Abak	35	6,172	4,188	32.1%
Itu	32	3,541	2,458	30.6%
Eastern Obolo	6	1,096	768	29.9%
Ikot-Abasi	18	1,952	1,377	29.5%
Essien-Udim	31	6,199	4,422	28.7%
Uruan	15	2,514	1,862	25.9%
Eket	41	4,089	3,041	25.6%
Ibesikpo-Asutan	19	2,642	1,978	25.1%
Nsit-Ubium	19	1,777	1,344	24.4%

Note: Ukanafun (nominal dropout, -60.1%) is excluded. Figures are computed after merging split-name LGA records. Source: Federal Ministry of Education (2024), DNEMIS School Census Data – Akwa Ibom Dataset Extract.

Uyo and Abak, together accounting for 99 of the state's 615 schools, anchor the top of the ranking, with Itu, Eastern Obolo, Ikot-Abasi, and Essien-Udim close behind. The concentration of loss in Uyo, the state capital and largest urban centre, motivates the sector and location breakdown below.

Sector and Location Within Akwa Ibom: Evidence for a Migration Mechanism

Disaggregating Akwa Ibom's 615 schools by sector and location reveals a pattern not visible in the state-level headline figure. Public schools (262 schools) enrol 60,855 students in SS1 but only 43,513 in SS3, a 28.5% loss, substantially worse than the 18.3% national public-sector loss implied by Table 1. Private schools (353 schools), by contrast, enrol 24,312 students in SS1 and 26,512 in SS3: private-sector enrolment rises by 8.9% over the same period. Because SS1 and SS3 are measured cross-sectionally rather than as a tracked cohort, a sector whose SS3 enrollment exceeds its SS1 enrollment is not "over-retaining" its own SS1 entrants; it is consistent with, though not proof of, net inflow from elsewhere in the system, most plausibly from the public sector as students approach WASSCE.

The same pattern is sharper by location. Rural schools retain 90.8% of enrollment (a 9.2% loss), close to the 93.3% national rural figure, while urban schools retain only 68.8% (a 31.2% loss), well below the 79.8% national urban figure and the single largest sub-group loss identified anywhere in this analysis. In Uyo LGA specifically, public-sector SS1 enrollment of 8,368 falls to 4,931 by SS3—a 41.1% loss, while Uyo's private sector rises from 2,020 to 2,028 (Table 3). Uyo's private-sector schools, in other words, show almost no net change in size across the three grades, while its public schools lose more than two in five SS1 entrants by the time of the corresponding SS3 cohort.

Table 3: **Akwa Ibom Retention by Sector and Location, State-wide and Uyo LGA**

Group	SS1	SS3	Change
State: Public	60,855	43,513	-28.5%
State: Private	24,312	26,512	+8.9%
State: Rural	51,908	47,119	-9.2%
State: Urban	33,247	22,887	-31.2%
Uyo: Public	8,368	4,931	-41.1%
Uyo: Private	2,020	2,028	+0.4%

This pattern is consistent with two non-exclusive explanations developed further in Section 5: households in and around the state capital transferring children from public to private schools ahead of WASSCE, and/or genuine withdrawal from public schools that is partly offset, at system level, by private-sector absorption of a subset of those students. The data cannot, on their own, separate these two mechanisms, since no student-level identifier links a given SS1 entrant to a later SS3 record; we return to this limitation.

Discussion

The Access-Without-Retention Paradox

Akwa Ibom succeeded in bringing children into SS1 through fee abolition, subventions, and examination-fee assumption, but has not kept them enrolled through to SS3. This mirrors the Ghanaian experience, where fee-free secondary education raised completion in aggregate (Stenzel et al., 2024) while simultaneously straining resources and, in some accounts, reducing student motivation once the direct cost of schooling was removed (Casely-Hayford et al., 2025). This also echoes Uganda, where Omoeva and Gale (2016) found USE "universal but not free" in the sense that indirect costs persisted after tuition fees were abolished. Akwa Ibom's own policy design already anticipated part of this problem by assuming WASSCE fees directly rather than leaving them as a residual household cost; the fact that the state still underperforms the national retention benchmark suggests the remaining barriers are not primarily financial in the narrow fee sense, but are concentrated in a specific transition (SS2–SS3) and a specific place (urban centres, above all Uyo).

A systematic comparison with Ghana's Free SHS experience suggests three possible explanations for Akwa Ibom's comparatively weaker retention outcomes. First, Ghana's policy is newer (2017 vs. 2009), and the most credible completion gains documented by Stenzel et al. (2024) may reflect early-phase effects that diminish over time. Second, funding intensity may differ; Ghana's centralised funding model may provide more consistent per-student resources than Akwa Ibom's sub-national approach. Third, data quality differences between the two contexts cannot be ruled out, particularly given the NEMIS anomalies documented. Future research should pursue direct cross-national comparison using harmonised measures.

Why Does Uyo Leak Most?

Two mechanisms, not mutually exclusive, are consistent with the sector evidence discussed above. First, private-sector migration: Uyo's high density of private schools, combined with the near-stagnant size of its private-sector cohort from SS1 to SS3, is consistent with households transferring children from public to private schools in the run-up to WASSCE,

seeking smaller class sizes and perceived examination-preparation advantages—the same excess-demand dynamic Obiakor (2025) documents for private-school choice in rural and urban Nigeria more broadly, and the same stratifying effect Baum et al. (2018) find in Lagos. Second, an economic-pull mechanism: Uyo's relatively larger urban labour market may draw SS2-age adolescents into informal work or apprenticeship before they reach SS3, a pattern that is well documented for household-level dropout decisions elsewhere in Nigeria (Ibor et al., 2024) even though the NEMIS data used here cannot observe individual reasons for leaving.

Because retention here is measured cross-sectionally, we cannot distinguish a student who transferred from a public to a private school within Uyo from a student who left the education system entirely; both would appear, in the public-sector figures alone, as "lost." This is a genuine limitation of the data, not merely a caveat: it means the 41.1% public-sector attrition figure for Uyo should be read as an upper bound on true withdrawal from school, with some unknown share representing intra-system transfer rather than dropout in the ordinary sense. Resolving this would require either a unique student identifier linking successive census years, which NEMIS does not currently provide, or a dedicated cohort-tracking survey of the kind recommended.

The Public-Private Divide and the STEM Pipeline

If private schools are absorbing a share of the students public schools lose, and if Computer Studies and other STEM-adjacent WASSCE subjects are disproportionately concentrated in SS2–SS3 (the years of greatest loss), then Akwa Ibom's STEM pipeline risks becoming progressively privatised even where overall system-level enrollment holds up. This argument remains speculative, however, as the DNEMIS extract used here does not include subject-level enrollment data, and the claim that STEM subjects are concentrated in SS2–SS3 requires empirical verification. This would be consistent with the broader Nigerian pattern in which STEM program enrollment already skews by gender and, evidence suggests, by institutional resourcing (Madu, 2024): a state that markets itself as an aspiring technology hub cannot build a broad STEM workforce if access to the SS2–SS3 years in that pipeline becomes contingent on a family's ability to pay for private schooling that free public policy was designed to make unnecessary. Future research should examine subject-level enrollment patterns to test this hypothesis directly.

Data Quality as a Development Issue

The missing states (Bauchi, Borno, Kaduna, Osun), the zero-valued Edo SS1 field, the duplicated Kwara state record, and the ten duplicated Akwa Ibom LGA records documented in Section 3.2 are not incidental to this paper's findings; they are a finding in their own right. El Mazbouh et al. (2025) argue that EMIS platforms across development contexts routinely capture data that is never adequately validated or used; the anomalies catalogued here show the same pattern inside NEMIS specifically, a decade after Ezeugbor et al. (2016) documented comparable record-availability gaps in Anambra State. Reporting these issues transparently, and correcting for them where the correction is verifiable (as with the Akwa Ibom LGA merge in Table 2), is offered here as a small contribution to the credibility of NEMIS-based research going forward, and as a direct input into the validation recommended.

Limitations

Four limitations qualify these findings:

1. **Cross-sectional Measure:** The synthetic-cohort retention measure cannot separate true dropout from repetition, inter-school transfer, or inter-state migration.
2. **Single-year Snapshot:** The single-year snapshot precludes trend analysis; we cannot say whether Akwa Ibom's 17.8% attrition is rising, falling, or stable relative to the years since the 2009 policy extension.

3. **Descriptive Approach:** Associations between sector, location, and retention are documented but not causally identified, and the mechanisms proposed should be read as plausible interpretations consistent with the pattern of results, not as tested hypotheses.
4. **National Benchmark Limitation:** The national benchmark of 14.07% is derived from 33 states with usable data and may not be representative of the true national average, particularly given the absence of four states (Bauchi, Borno, Kaduna, Osun) that may have systematically different retention patterns. Comparisons between Akwa Ibom and the national figure should therefore be interpreted with caution.

Policy Implications

i. **SS2 Early-warning System:** NEMIS data could be used operationally, not just retrospectively, to flag schools where SS1–SS2 enrollment has already fallen by more than roughly one-quarter, triggering counselling or family-support outreach before the SS2–SS3 transition compounds the loss.
ii. **Urban Public-school Audit:** Uyo, Abak, Itu, Eastern Obolo, and Ikot-Abasi warrant a targeted audit distinguishing how much of their measured attrition reflects transfer to private schools versus withdrawal from school altogether—the distinction this paper's data cannot resolve on its own.
iii. **Senior Secondary Retention Supplement:** Conditional support, transport subsidies, remedial WASSCE preparation, and targeted bursaries for SS3 completion in the highest-loss LGAs, with explicit attention to closing the public-private retention gap rather than only the fee gap already addressed by existing policy. While detailed cost estimates are beyond the scope of this article, the scale of the proposed intervention would likely require dedicated budget lines and coordination between state and local government authorities.
iv. **NEMIS Validation Layer:** The state and federal government should mandate automated SS1–SS2–SS3 consistency checks, standardised LGA and state naming conventions, and field-level validation (for example, flagging a zero value in an otherwise complete school record) before public release, addressing the specific anomalies documented.
v. **Cohort-linked Data Collection:** Introducing a persistent student or school-cohort identifier into future NEMIS rounds would allow researchers to distinguish genuine dropout from intra-system transfer, directly resolving the limitation discussed.

Conclusion

Fifteen years after enshrining free and compulsory education through to senior secondary school, Akwa Ibom State demonstrates that removing fees is necessary but not sufficient for completion. Attrition of 17.8% overall, rising to 33.0% in the state capital, sits alongside a public-sector enrollment decline of 28.5% state-wide and 41.1% in Uyo specifically, a decline that coincides with private-sector enrollment growth rather than a uniform system-wide contraction. This pattern is consistent with, though not proof of, within-state transfer from public to private schools as students approach WASSCE. When contrasted with comparable evidence from Ghana, Kenya, and Uganda, this suggests that free senior secondary access policies across the region succeed at the threshold of enrollment but require a distinct, separately designed retention intervention to succeed at the threshold of completion. For Akwa Ibom, and for Nigeria's broader ambitions under SDG 4.1, that intervention should target the SS2–SS3 transition specifically, the state's urban public schools in particular, and the reliability of the NEMIS data infrastructure on which any future evaluation depends.

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