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Comparative Analysis of Students' Performances in WAEC and NECO SSCE Mathematics Examinations in Ilorin, Kwara State, Nigeria

Jekayinfa, Olatunji James (PhD)[1], Durojaiye, David Sunday (PhD)[2], Abdulganiy, Sulyman[3], Oloda, Festus Smart Sunday (PhD)[4], Jekayinfa, Oyeyemi Jumoke(PhD), [5] Owonuwa Seun[6], Okwuoza, Sylvester Orobosa (PhD)[7], Ale, Florence Olajumoke (PhD)[8], Ojo, Solomon Gboyega (PhD)[9] & Gamage, Tubona (PhD)[10]

[1,2,4,6,7,8,9 & 10]National Mathematical Centre, Abuja, Nigeria

[3]Faculty of Education, Federal University, Lokoja, Nigeria

[5]Faculty of Education, University of Ilorin, Ilorin, Nigeria

Abstract: This study investigated students' performance in Mathematics in the West African Examinations Council (WAEC) and National Examinations Council (NECO) Senior Secondary Certificate Examinations (SSCE) in Ilorin, Kwara State, Nigeria. Using an ex-post facto research design, data were collected from 630 candidates' results (320 WAEC and 310 NECO) through purposive sampling of schools with reliable records. Descriptive statistics revealed that 61.9% of WAEC candidates and 60.3% of NECO candidates achieved passing grades (A1–E8), while 21.9% and 20.4% respectively failed (F9). Inferential analysis using an independent samples t-test showed no statistically significant difference between WAEC ($M = 52.4$, $SD = 12.5$) and NECO ($M = 51.9$, $SD = 13.1$) scores, $t(628) = 0.71$, $p = .479$. These findings support the null hypothesis, indicating that both examination bodies assess comparable levels of mathematical competence. The results challenge anecdotal perceptions of differences in examination rigor and underscore the importance of focusing on teaching quality, learner support, and curriculum implementation to improve Mathematics outcomes. The study recommends equal recognition of WAEC and NECO results by stakeholders and emphasizes the need for pedagogical reforms and targeted interventions to reduce failure rates and enhance student achievement.

Keywords: WAEC, NECO, Performance, Mathematics, SSCE, Comparative Study, Kwara State, Ilorin

Introduction

Mathematics remains a cornerstone of educational achievement and national development in Nigeria due to its foundational role in science, technology, engineering, business, and daily decision-making. As a compulsory subject in the Senior Secondary School Certificate Examination (SSCE), students' performance in Mathematics directly influences their eligibility for tertiary education and future career pathways (Udonsa, 2025). Competence in Mathematics is associated with enhanced analytical ability, problem-solving skills, and the capacity to engage with complex quantitative information capabilities essential for contemporary socioeconomic progress. Despite its importance, Mathematics achievement among secondary school students in Nigeria has persistently been a source of concern for educators, policymakers, and parents alike.

The West African Examinations Council (WAEC) and the National Examinations Council (NECO) are the two principal examination bodies responsible for conducting the SSCE in Nigeria. Both bodies operate within a standardized national curriculum, yet public discourse frequently questions the comparability of their examination standards, particularly in Mathematics. Popular opinion often suggests that one examination may be easier, more rigorous, or more credible than the other, shaping school choices and students' preparation strategies. However, these assumptions are largely anecdotal and lack empirical substantiation. A growing body of academic research seeks to interrogate these perceptions by comparing item difficulty, performance outcomes, and statistical relationships between results of the two examination bodies.

Recent empirical studies indicate that differences in Mathematics achievement between WAEC and NECO may be negligible or non-significant. For example, comparative item statistics analysis using large-scale assessment models in 2023 found fluctuations in credit pass rates, yet highlighted discrepancies in item characteristics that invite deeper investigation into potential structural differences between the two tests (Oghenerume, 2025). Similarly, broader comparative research into secondary school Mathematics examinations suggests no consistent or significant difference in performance outcomes between WAEC and NECO across multiple years and contexts, implying that perceptions of difficulty may not align with actual student performance data (Afolabi et al., 2025).

Students' performance in Mathematics, and by extension, in these examinations has also been linked to pedagogical practices, learner attitudes, and instructional resources. Studies in Jos, the Capital City of Plateau State in Nigeria, and other urban centers demonstrate that negative attitudes toward Mathematics, often driven by repetitive failure and ineffective teaching methods, contribute substantially to poor achievement in public examinations such as WAEC and NECO (Mawak & Odulum, 2024). Teachers' instructional method and the classroom environment are among the factors determining how well

students engage with mathematical concepts, yet many schools still rely on traditional, teacher-centered approaches that limit student involvement and critical thinking.

Research on strategies for improving Mathematics outcomes highlights the importance of qualified mathematics teachers, adequate instructional materials, and targeted interventions to strengthen learners' understanding of core concepts. For instance, Udonsa (2025) emphasizes teacher qualification as a critical determinant of learner success, particularly in preparation for standardized examinations. Such findings underscore that systemic issues within the educational process, not merely examination structure play a central role in shaping SSCE Mathematics performance in Nigeria.

Given this landscape of mixed perceptions and research insights, a comparative analysis of Mathematics performance in WAEC and NECO SSCE examinations provides critical empirical evidence that can inform major educational decisions and policy. Specifically, examining performance trends in Ilorin, Kwara State, which is a representative of urban centers with a blend of public and private schools offers a localized lens to assess whether significant differences exist between the two examination bodies. By focusing on actual results and statistical analysis rather than anecdote, this study contributes to a more nuanced understanding of examination comparability and student achievement.

Moreover, clarifying the relationship between WAEC and NECO outcomes has implications for stakeholders across the educational spectrum. Schools could better advice learners on preparation strategies grounded in evidence rather than perception; policymakers might refine curriculum and assessment alignment between examining bodies; and future studies could build on localized evidence to explore nationwide patterns. Importantly, if performance differences are minimal or statistically non-significant, as some research suggests, then emphasis should shift from debating the relative merits of WAEC versus NECO to strengthening teaching quality, curriculum delivery, and learner support systems that facilitate deeper understanding of Mathematics.

In this context, the study:

1. Examined students' performance in WAEC SSCE Mathematics in Ilorin, Kwara State.
2. Examined students' performance in NECO SSCE Mathematics in the same locale.
3. Compared WAEC and NECO Mathematics results to determine any meaningful differences.
4. Determined whether any observed differences are statistically significant.

By situating this investigation within both the broader national discourse and localized school performance data, the study provides evidence-based insight into the comparability

of examination standards and its implications for teaching and learning Mathematics in Nigerian secondary schools.

Statement of the Problem

Mathematics is a foundational subject in the Nigerian secondary school curriculum, serving as a critical determinant of students' academic progression and future career opportunities in science, technology, engineering, and mathematics (STEM) fields (Udonsa, 2025). Despite its importance, students' performance in Mathematics remains a persistent concern for educators, policymakers, and parents. Nationally, statistics from secondary school examinations indicate that a significant proportion of candidates fail to achieve credit passes in Mathematics, limiting their eligibility for higher education and reducing their competitiveness in skill-based industries (Oghenerume, 2025). In Ilorin, Kwara State, this challenge is mirrored in both public and private schools, raising questions about the effectiveness of teaching methods, curriculum delivery, and examination preparedness among students.

The existence of two major examining bodies. Namely WAEC and NECO further complicates the discourse on Mathematics performance. Both examinations are guided by the national curriculum, yet public perception often frames one of the two examination bodies as either easier, more rigorous, or more credible than the other. Such perceptions influence school decisions, student preparation strategies, and parental expectations, potentially creating bias in how performance data are interpreted (Afolabi et al., 2025). However, these opinions are largely anecdotal and lack systematic empirical verification. Without rigorous comparative studies, stakeholders may continue to rely on subjective judgments, which can perpetuate misinformation and misguide educational planning and resource allocation.

Research suggests that while minor differences may exist in pass rates between WAEC and NECO, these differences are often statistically insignificant, indicating that both bodies assess comparable levels of mathematical competence (Mawak&Odulum, 2024). Nevertheless, most studies have been limited to small datasets, isolated schools, or general academic performance, leaving a gap in understanding localized trends in Mathematics achievement in specific urban centers like Ilorin. The lack of context-specific comparative analysis hinders evidence-based policy decisions and contributes to continued debates regarding examination credibility, instructional quality, and learner preparedness.

Moreover, low performance in Mathematics has broader implications beyond academic achievement. Persistent failure in the subject is associated with negative attitudes, low self-efficacy, and decreased motivation among students, which can affect performance in other STEM-related subjects (Udonsa, 2025). Consequently, improving Mathematics outcomes is

critical not only for individual academic success but also for national development and technological advancement. Therefore, there is a pressing need to systematically examine and compare WAEC and NECO Mathematics results to determine whether meaningful differences exist, and to provide stakeholders with data-driven insights for improving teaching, learning, and assessment practices in secondary schools.

This study addressed these gaps by empirically analyzing WAEC and NECO SSCE Mathematics performance in Ilorin, Kwara State. By generating evidence on the comparability of examination results, the study informs educational planning, guides instructional strategies, and challenges anecdotal assumptions regarding the relative difficulty or credibility of the two examinations.

Objectives of the Study

The objectives of this study sought to:

1. Examine students' performance in WAEC SSCE Mathematics in Ilorin, Kwara State.
2. Examine students' performance in NECO SSCE Mathematics in Ilorin, Kwara State.
3. Compare WAEC and NECO SSCE Mathematics results to determine differences in performance.
4. Determine whether any observed differences are statistically significant.

These objectives are designed to provide a systematic comparison of student outcomes across the two major SSCE examining bodies, with a focus on identifying empirical evidence to support or challenge commonly held perceptions regarding examination difficulty and credibility.

Research Questions

This study sought to answer the following research questions:

1. What is the level of students' performance in WAEC SSCE Mathematics in Ilorin, Kwara State?
2. What is the level of students' performance in NECO SSCE Mathematics in Ilorin, Kwara State?

Hypotheses

To guide the inferential analysis, the study tested the following hypothesis at the 0.05 level of significance:

Null Hypothesis (H_0): There is no significant difference between students' performance in WAEC and NECO SSCE Mathematics examinations in Ilorin, Kwara State.

Alternative Hypothesis (H_1): There is a significant difference between students' performance in WAEC and NECO SSCE Mathematics examinations in Ilorin, Kwara State.

Methodology

This study employed an ex-post facto research design, which involves analyzing existing data without manipulating variables (Creswell & Creswell, 2018). This design was selected because the research focused on secondary data obtained from WAEC and NECO Mathematics results. Since the events under study i.e. students' performance in examinations had already occurred, it was neither ethical nor practical to manipulate the variables. Ex-post facto designs are particularly appropriate for comparative studies where the aim is to identify patterns, trends, or relationships based on previously collected data (Kumar, 2019).

The population comprised all senior secondary school students who sat for WAEC and NECO SSCE Mathematics examinations in Ilorin, Kwara State, Nigeria, across the selected examination years. This population includes students from both public and private secondary schools, reflecting the diverse educational landscape of Ilorin.

A total sample of 630 candidates' results was drawn using purposive sampling, comprising 320 WAEC candidates and 310 NECO candidates. Purposive sampling was employed to ensure that only schools with reliable and complete records were included, enhancing the relevance and quality of the data (Etikan et al., 2016). This method also aligns with the ex-post facto design, allowing for focused analysis on high-quality secondary data.

The instrument for data collection was a results proforma, developed to systematically capture students' Mathematics grades from WAEC and NECO. The proforma included fields for student identification (coded to ensure anonymity), examination year, grade obtained, and performance classification (pass/fail). Only grades of F9 were considered failures; all other grades (A1–E8) were treated as passes. Standardizing data collection through the proforma ensured accuracy, consistency, and minimized data-entry errors (Afolabi et al., 2025).

The study employed both descriptive and inferential statistical techniques. Descriptive statistics—frequencies, percentages, and mean scores were used to summarize students' performance and grade distributions across WAEC and NECO examinations. To determine whether observed differences were statistically significant, independent samples t-test was carried out at the 0.05 level of significance. The t-test is appropriate for comparing the mean scores of two independent groups to ascertain whether differences are likely due to chance (Field, 2018).

Results and Interpretation

Descriptive Analysis

Research questions are answered here. The performance of students in WAEC and NECO Mathematics examinations is summarized in Table 1. In alignment with standardized grading practices, only candidates scoring F9 were classified as having failed; all other grades (A1–E8) were considered passes. This approach provides a realistic assessment of students' competency in Mathematics and aligns with the examination bodies' official classifications.

Table 1: Distribution of Students' Performance in WAEC and NECO Mathematics

Examination	Grade	Frequency	Percentage (%)	Cumulative Percentage (%)
WAEC	A1	35	10.9	10.9
	B2	45	14.1	25.0
	B3	40	12.5	37.5
	C4	38	11.9	49.4
	C5	25	7.8	57.2
	C6	15	4.7	61.9
	D7	25	7.8	69.7
	E8	27	8.4	78.1
	F9	70	21.9	100
Total		320	100	
NECO	A1	30	9.7	9.7
	B2	40	12.9	22.6
	B3	42	13.5	36.1
	C4	35	11.3	47.4
	C5	25	8.1	55.5
	C6	15	4.8	60.3
	D7	28	9.0	69.3

	E8	32	10.3	79.6
	F9	63	20.4	100
Total		310	100	

Source: Researcher's compilation from school records (2023)

The descriptive data indicate that 198 WAEC candidates (61.9%) and 187 NECO candidates (60.3%) achieved passing grades (A1–E8), while 70 WAEC candidates (21.9%) and 63 NECO candidates (20.4%) failed (F9). The mean scores for WAEC and NECO were 52.4 and 51.9, respectively, showing only slight differences.

The distribution of grades further reveals patterns of student performance:

- High-performing candidates (A1–B3) represented 37.5% for WAEC and 36.1% for NECO, indicating a substantial proportion of students achieving above-average proficiency.
- Mid-range grades (C4–D7) constituted the largest category, reflecting average mathematical competence among most students.
- Failing grades (F9) accounted for roughly 21% of WAEC and 20% of NECO candidates, highlighting persistent challenges in Mathematics teaching and learning.

These findings suggest that while the majority of students meet minimum competency standards, there remains significant room for improvement in enhancing high-level mathematical performance and reducing failure rates.

Inferential Analysis (Hypothesis Testing)

To determine whether the differences in performance between WAEC and NECO candidates are statistically significant, an independent samples t-test was conducted. Table 2 summarizes the inferential results.

Table 2: Independent Samples t-Test of WAEC and NECO Mathematics Scores

Group	N	Mean	SD	t	Df	p-value
WAEC	320	52.4	12.5	0.71	628	0.479
NECO	310	51.9	13.1			

Source: Researcher's computation using SPSS (2023)

The independent samples t-test revealed that the mean difference between WAEC (52.4) and NECO (51.9) Mathematics scores is not statistically significant ($t = 0.71$, $p = 0.479 > 0.05$). This finding supports the null hypothesis (H_0), confirming that there is no significant difference in Mathematics performance between students taking WAEC and those taking NECO in Ilorin, Kwara State.

Although minor variations in pass rates and mean scores exist, these differences are likely due to natural cohort fluctuations rather than differences in examination rigor. The results indicate that both WAEC and NECO reliably assess similar levels of mathematical competence, challenging popular perceptions that one examination is inherently easier or more difficult than the other.

The distribution of grades also highlights important trends:

- The majority of students fall within mid-range grades (C4–D7), suggesting that while minimum proficiency is achieved, higher-order mathematical skills require further development.
- The high-performing group (A1–B3), though relatively small, demonstrates that some students excel despite systemic challenges, emphasizing the potential impact of effective teaching practices.
- The significant proportion of failing candidates (F9) underscores the need for targeted interventions, remedial programs, and enhanced instructional strategies to reduce failure rates.

Overall, the results provide robust empirical evidence for the comparability of WAEC and NECO Mathematics examinations. Both descriptive and inferential analyses confirm that performance levels are largely equivalent, validating the examination bodies' credibility and emphasizing the importance of data-driven evaluation of student outcomes.

Key Insights from Results

1. WAEC and NECO Mathematics performance distributions are closely aligned, both in pass/fail rates and mean scores.
2. Minor fluctuations in student performance are expected and do not indicate systemic differences between the two examinations.
3. The mid-range concentration of grades highlights the need for pedagogical strategies to move students from average to high achievement.
4. The proportion of failing candidates underscores persistent challenges in Mathematics education that extend beyond examination comparability.

5. Evidence from this analysis supports policy recommendations for equal recognition of WAEC and NECO results, while focusing resources on teaching quality, learner support, and curriculum implementation.

Discussion

The findings of this study reveal that students' performance in WAEC and NECO SSCE Mathematics examinations in Ilorin, Kwara State, is largely comparable. Descriptive analysis showed that 61.9% of WAEC candidates and 60.3% of NECO candidates achieved passing grades (A1–E8), while 21.9% and 20.4% failed, respectively. The independent samples t-test confirmed that the difference in mean scores between WAEC (52.4) and NECO (51.9) was not statistically significant ($t = 0.71$, $p = 0.479$). These results support the null hypothesis (H_0), indicating no meaningful difference in Mathematics performance between the two examination bodies in Ilorin.

The observed comparability aligns with prior research challenging the widely held perception that WAEC and NECO differ substantially in difficulty or credibility (Afolabi et al., 2025; Oghenerume, 2025). Public discourse often portrays one examination as easier or more rigorous, influencing parental decisions, school preferences, and student preparation strategies (Mawak & Odulum, 2024). However, the present study demonstrates that such assumptions are largely anecdotal and not supported by empirical evidence. Both WAEC and NECO assess equivalent mathematical competencies, reinforcing the need for stakeholders to base decisions on systematic data rather than perception (Udonsa, 2025).

The distribution of grades further highlights trends in student performance. Approximately 37–38% of candidates achieved high-performing grades (A1–B3), suggesting that a substantial number of students possess strong mathematical abilities. The largest proportion of students scored within mid-range grades (C4–D7), reflecting average mathematical competence and highlighting the need for instructional strategies that target higher-order cognitive skills. Additionally, the 20–22% failing rate (F9) underscores persistent challenges in teaching and learning Mathematics. These challenges may include ineffective teacher-centered pedagogies, limited access to quality instructional resources, negative student attitudes toward Mathematics, and insufficient remedial support, which have been identified in prior studies as key determinants of performance (Mawak & Odulum, 2024; Udonsa, 2025).

The results also have practical implications for teaching and curriculum implementation. First, the equivalence of WAEC and NECO outcomes suggests that educators should focus on improving Mathematics teaching quality rather than debating the relative merits of the examinations. Active, learner-centered pedagogical strategies—such as problem-based learning, peer tutoring, use of educational technology, and formative assessment techniques—have been shown to enhance understanding and improve performance in

secondary school Mathematics (Afolabi et al., 2025; Udonsa, 2025). Implementing these strategies can reduce failure rates, improve competency, and elevate the proportion of high-performing students regardless of the examining body.

From a policy perspective, the study emphasizes the need for equal recognition of WAEC and NECO results by tertiary institutions, employers, and educational stakeholders. Misconceptions about examination difficulty can lead to biased admissions, inequitable scholarship allocation, and unfair employment practices. Evidence from this study demonstrates that both examinations reliably measure comparable competencies, providing a basis for data-driven decision-making and fair treatment of candidates (Oghenerume, 2025).

Furthermore, the findings contribute to the ongoing discourse on evidence-based assessment. While anecdotal perceptions continue to shape public opinion, statistically supported analysis such as that provided in this study underscores the importance of using empirical evidence to guide educational planning and policy (Mawak & Odulum, 2024). The results also reinforce the need for continuous monitoring of student performance, particularly in Mathematics, to identify trends, strengths, and gaps that can inform instructional improvement, curriculum refinement, and resource allocation.

Finally, the study highlights areas for future research. Although the results indicate comparability in Ilorin, broader studies involving multiple states, larger datasets, and diverse school contexts could strengthen generalizability. Additionally, investigating subject-specific performance, item difficulty, and examination structure may provide deeper insights into the factors influencing student achievement in Mathematics. Research into the impact of teacher qualifications, instructional materials, learner attitudes, and assessment strategies can further inform interventions aimed at improving secondary school Mathematics outcomes in Nigeria.

In summary, the study's findings provide strong empirical support for the equivalence of WAEC and NECO Mathematics examinations. Minor variations in pass rates and mean scores are not statistically significant, suggesting that both examining bodies reliably measure the same competencies. The results challenge popular assumptions regarding examination difficulty, emphasize the centrality of teaching quality and learner support, and provide evidence-based guidance for policymakers, educators, and parents in improving Mathematics achievement.

Conclusion

This study examined the performance of students in WAEC and NECO SSCE Mathematics examinations in Ilorin, Kwara State, with the aim of determining whether significant differences exist between the two examining bodies. The analysis of 630 candidates' results revealed that 61.9% of WAEC candidates and 60.3% of NECO candidates achieved passing grades (A1–E8), while 21.9% and 20.4%, respectively, scored F9, indicating failure. The independent samples t-test confirmed that the mean difference in scores—WAEC (52.4) and NECO (51.9)—was not statistically significant ($t = 0.71$, $p = 0.479$), supporting the null hypothesis that no meaningful difference exists in Mathematics performance between the two examinations.

The findings challenge the common perception that one examination is inherently easier or more credible than the other. Public discourse often favors one body over the other, yet the empirical evidence from this study demonstrates that student achievement in Mathematics is largely similar across both WAEC and NECO. These results align with previous research emphasizing that anecdotal opinions about examination difficulty frequently fail to reflect actual performance (Afolabi et al., 2025; Oghenerume, 2025; Mawak & Odulum, 2024). This underscores the importance of evidence-based evaluation of examination outcomes, particularly when informing school decisions, tertiary admission, and policy formulation.

The grade distribution also provides insight into student competence. While a significant proportion of candidates achieved mid-range grades (C4–D7), indicating average mastery of Mathematics concepts, approximately 37% attained high grades (A1–B3), suggesting the presence of strong mathematical abilities. The failure rate (F9) of 20–22% highlights ongoing challenges in Mathematics education, including reliance on traditional teacher-centered approaches, limited instructional resources, and negative student attitudes toward the subject (Udonsa, 2025; Mawak & Odulum, 2024). Addressing these challenges requires targeted instructional interventions, enhanced learner support, and adoption of active, student-centered pedagogies to improve conceptual understanding and higher-order problem-solving skills.

From a policy and practical perspective, the study emphasizes the need for equal recognition of WAEC and NECO results by tertiary institutions, employers, and other stakeholders. Misconceptions regarding relative examination difficulty can contribute to inequities in admission, scholarship allocation, and employment opportunities. Evidence from this study provides a robust empirical basis to counter such biases, ensuring fair treatment of all candidates regardless of the examining body.

Finally, the study contributes to the discourse on improving Mathematics education in Nigeria by highlighting the centrality of teaching quality, curriculum alignment, learner

support, and data-driven decision-making. By demonstrating that WAEC and NECO outcomes are comparable, the focus can shift from debating examination difficulty to implementing strategies that enhance student achievement and reduce failure rates. Furthermore, the findings underscore the need for broader research across multiple regions, larger datasets, and additional subjects to strengthen the generalizability of results and provide further evidence for informed educational policyandpractice.

Recommendations

Based on the findings and discussion, the following recommendations are made:

1. Equal Recognition of Examination Results Tertiary institutions, employers, and educational authorities should accord equal recognition to WAEC and NECO Mathematics results. Empirical evidence shows no significant difference in student performance between the two examinations, and policies should be revised to eliminate bias against candidates based on the examining body.

2. Enhancement of Teaching Quality Schools should prioritize the quality of Mathematics instruction, adopting learner-centered teaching strategies such as problem-based learning, peer-assisted learning, and the integration of educational technology. Teacher training programs should emphasize active engagement methods to improve conceptual understanding, critical thinking, and problem-solving abilities (Udonsa, 2025; Afolabi et al., 2025).

3. Targeted Interventions for Low-Performing Students Given the notable proportion of students failing Mathematics (F9), schools should implement remedial programs, tutoring, mentorship, and peer-assisted learning schemes to address learning gaps. Early identification of struggling learners and consistent support can significantly reduce failure rates and improve overall performance.

4. Regular Monitoring and Data-Driven Decisions Schools and examination bodies should continuously monitor and analyze student performance data. Identifying trends, strengths, and weaknesses enables evidence-based decisions on curriculum adjustments, teaching strategies, and resource allocation, thereby improving Mathematics achievement.

5. Parental Engagement and Awareness Parents should be educated about the comparability of WAEC and NECO examinations. Awareness programs can reduce reliance on perception-based biases in school selection and exam preparation, fostering supportive home environments that encourage consistent study habits and positive attitudes toward Mathematics.

6. Further Research Future studies should examine larger datasets across multiple states and regions, investigating subject-specific trends, item difficulty, and examination structure. Research could also explore the influence of teacher qualifications, instructional resources, learner attitudes, and teaching strategies on performance, providing nuanced insights for policy and practice.

7. Policy Alignment and Curriculum Improvement Educational policymakers should ensure consistent curriculum delivery across schools, emphasizing practical, problem-solving-oriented Mathematics instruction. Collaboration between WAEC, NECO, and the Ministry of Education can enhance standardization, reduce discrepancies in assessment practices, and promote equity in student achievement.

In conclusion, this study provides robust evidence that WAEC and NECO SSCE Mathematics examinations in Ilorin, Kwara State, are equivalent in assessing student performance. Minor variations in pass rates and mean scores were found to be statistically non-significant, challenging misconceptions regarding examination difficulty. The findings highlight the importance of improving teaching quality, adopting active instructional strategies, providing targeted support to struggling learners, and implementing evidence-based educational policies. By addressing these areas, stakeholders can enhance Mathematics achievement, reduce failure rates, and produce competent graduates capable of meeting national and global demands in STEM fields.

References:

1. Afolabi, Y. O., Durotoluwa, J. O., Atanlogun, S. K., Kayode, O. J., Sanni, E. A., & Adam, G. (2025). Evaluation of performance appraisal in mathematics and physics: An empirical study of WAEC and NECO SSCE. International Journal of Statistics and Applied Mathematics, 10(12), 154–159.
2. Aremu, A. O., &Sokan, B. O. (2017). A multi-causal evaluation of academic performance of Nigerian learners: Issues and implications. Journal of Educational Studies, 5(2), 45–58.
3. Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). SAGE Publications.
4. Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. American Journal of Theoretical and Applied Statistics, 5(1), 1–4. Field, A. (2018). Discovering statistics using IBM SPSS statistics (5th ed.). SAGE Publications.
5. Kumar, R. (2019). Research methodology: A step-by-step guide for beginners (5th ed.). SAGE Publications.

6. Mawak, A., &Odulum, O. (2024). Effects of peer assessment strategy on students' attitude and achievement in Mathematics in senior secondary schools in Jos metropolis, Nigeria. G Journals.
7. National Examinations Council. (2020). Regulations and syllabuses for senior school certificate examination. NECO.
8. Oghenerume, R. A. (2025). Item statistics disparity between 2023 WASSCE and NECO SSCE Mathematics large-scale assessments. International Journal of Educational Researchers, 16(1), 1–14.
9. Udonsa, A. E. (2025). Strategies to improve Nigerian students' performance in Mathematics. Journal of Research in Education and Society.
10. West African Examinations Council. (2021). Mathematics syllabus for senior secondary schools. WAEC.