



THE COMPARATIVE STUDY OF STUDENT'S PERFORMANCE IN WAEC AND NECO MATHEMATICS ACHIEVEMENT BETWEEN 2020-2023 IN MAKURDI LGA

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1.0 Introduction

1.1 Background of the Study

Public examination became necessary when the educational industry was overcrowded after the Industrial Revolution. It is now used as a qualification examination to move students from one educational level to another (*Oghenerume, 2025*). The essence of public examination is to provide uniform assessment to all candidate who were exposed to a given curriculum. They handle large scale testing programmes of candidates taking the examinations they registered at the same time. The councils use standard scores to report the performance of the candidates. In Nigeria public examinations are taken by candidates in the terminal classes for certification, namely: primary six, junior secondary and senior secondary schools. The aims of secondary school education in Nigeria, as stated in the National Policy on Education (FGN, 2014), are to prepare the individual child for useful living in the society and higher education. It is at the end of six years tenure in the secondary school that the senior secondary school certificate examinations are taken. The school certificate examinations, which determine the placement of Nigerian students in higher learning and/or employment, are of particular concerned (Ololube, 2018).

Examination is a generic name for written exercises, oral questions, or practical tasks, set to test a candidate's knowledge and skill. It involves both quantitative and qualitative description of a pupil's behaviour, and the passing of value judgment concerning the desirability of that behaviour. According to Nworgu in Kpolovie (2018), examination agencies were set up to promote education, to co-ordinate educational programmes, and to control and monitor the quality of education in educational institutions, the essence of which is the organization of public examinations so as to provide uniform standards to all test takers, irrespective of the type or method of instruction they have received. Some of these examination bodies in Nigeria include the West African examinations Council (WAEC), the National Examination Council (NECO), the Joint Admission and Matriculation Board (JAMB), and the National Business and Technical Examination Board (NABTEB). A closer look at the operations of these boards reveals that some of them perform similar functions. WAEC, NECO and NABTEB, for instance, all conduct secondary school graduate certification, although in the case of NABTEB, the examination is reserved for graduates of Nigerian Technical and Vocational Colleges. The basic qualification for admission into any higher educational institution is the school certificate issued by the West African School Certificate Examinations Council (WAEC) and/or the National Examinations Council (NECO).

The WAEC was established through Ordinance 40 of 1951 that charged the body with determining the examinations required in the public interest in West Africa. The body was empowered to conduct such examinations and award certificates equivalent to those of examining authorities in the United Kingdom. However as observed by Temitope (2019) WAEC is challenged by mass leakage of examination papers at times traceable to the officials of the council, unnecessary delay in releasing results, uncontrollable population explosion of the candidates and over load of work as a result of too many examinations conducted by the council. The level of exam malpractice was so high in 1977 that the situation was tagged "Expo 77". This actually led the Federal Government to set up the Sogbtun Commission of inquiry to look into the problems of WAEC and the possibility of relieving the body of some of its burdens. The Sogbetun Commission's recommendations led to establishment of the National Examinations Council (NECO). National Examinations Council (NECO), which was established in April, 1999, transformed from the National Board for Educational Measurement (NBEM) established by Decree 69 of 1993. The body was also charged with the responsibility of conducting the Senior School Certificate Examination (SSCE), the first of which was conducted by the body in May/June, 2000. The establishment of NECO, which was seen by many as an attempt to reduce the burden of WAEC and mitigate the burden of testing large number of candidates, unfortunately led to concerns by some that creditability issues would inevitably arise (Afemikhe, 2018). With two examining bodies, WAEC and NECO, conducting parallel SSCEs, students admitted to write either version of the SSCE are assumed to possess similar academic strengths (those needed for undergraduate activities). In the recent past, however, some calls have been made for the cancellation of NECO for fear that the SSCE it administers is not as valid as that of the WAEC. Critics submit that a large portion (40%) of candidate's final outcome in each of the subject areas at the NECO Senior School Certificate Examination is made up of school-based teacher assessment scores. However, this assertion, if true, may not necessarily be detrimental to the credibility of NECO certification as the National Policy on Education has been quoted by Nworgu (2018) as stating that educational assessment and evaluation is to be liberalised by basing such evaluation in whole or part on continuous

assessment of the progress of the individual. Having been given a similar mandate, to conduct the Senior School Certificate Examination it would seem unfair if the holders of either the WAEC or NECO certificate are discriminated against. However, in the not-too-distant past, some universities in Nigeria and abroad denied entrance to holders of NECO certificates based on speculations about their integrity (Ibukun W. O. (2015). As a standardised test, the SSCE adheres to a uniform mode of test construction, administration, scoring and interpretation, and it should thus be expected that both WAEC and NECO test items pass through the same rigorous standardized procedures before they are administered to candidates. In this way, differences in achievement should be exclusively the result of chance factors like the individuality and academic dedication of candidates. Mathematics and English language achievement in this examination is one of the bases in which many have been using to fudge the credibility of the examination bodies. Most students consider Mathematics a difficult subject. Students' perception of any task, especially at the beginning, affects the outcome more than anything else (Maxwell *et al.*, 2015), hence students perform poorly in Mathematics tests and examinations. For the pervasiveness of Mathematics students develop unbridled ambition to pass Mathematics examinations at all costs through examination malpractices. Despite the challenges of this negative attitude of students and the obvious abstract nature of Mathematics, Ale and Adetula (2015) concluded in their study, that the poor performances of students in WAEC/SSCE Mathematics over the past two decades are reflections of the poor state of Mathematics teaching & learning processes in schools. This supports the conclusion of an earlier study by Alio (2016) that the poor performance of students in Mathematics has to do with the use of non-standard techniques in teaching problem solving by Mathematics teachers. These teaching methods are mainly teacher-centred and textbook directed rather than learner-centred. They emphasise whole class lecturing, competition for grades, memorisation of facts, standard rules and procedures at the detriment of genuine understanding, neglecting students' curiosity, motivation and goals in learning Mathematics (Akinsola, 2019). They are characterised by poor classroom organization, poorly coordinated students' activities, and poor student-teacher or student-student rapport. These constitute factors that hinder students from deriving maximum benefit from classroom work (Igbokwe, 2016). The situation could be very serious in our kind of secondary school system where the curriculum is competitive, examination driven.

1.2 Statement of the Problem

Despite the crucial role of Mathematics in shaping students' academic development and future opportunities, there exists a noticeable variability in performance outcomes across different examination bodies and years (Igbokwe, 2016). This prompts an essential inquiry into the factors contributing to these disparities and the implications for educational policy and practice. The comparative study seeks to delve into the nuances of student performance in Mathematics in the West African Examinations Council (WAEC) and National Examinations Council (NECO) within the timeframe of 2020 to 2023 in Makurdi Local Government Area. Over recent years, there has been growing concern about the proficiency of students in this subject, as reflected in their examination results. Despite the importance of assessing student performance in Mathematics, there remains a notable gap in knowledge regarding the comparative study of WAEC and NECO Mathematics achievement within Makurdi Local Government Area from 2020 to 2023. While individual performance data from both examination bodies may be available, there is a lack of comprehensive analysis that directly compares the outcomes of these assessments over a multi-year period. This gap inhibits a holistic understanding of the factors influencing student achievement and hinders the formulation of effective educational policies and interventions tailored to address specific challenges in Mathematics education.

Furthermore, existing research on student performance in Mathematics often focuses on national or regional trends, overlooking the nuances and intricacies at the local level, such as those within Makurdi Local Government. This gap in localized comparative analysis limits the ability to identify unique factors that may contribute to disparities in achievement between WAEC and NECO examinations within the same geographic area. Understanding these factors is essential for devising targeted strategies that can effectively address the specific needs of students in Makurdi Local Government Area and improve overall academic outcomes in Mathematics.

Additionally, the timeframe of 2020 to 2023 is particularly significant due to the disruption caused by events such as the COVID-19 pandemic, which may have had varying impacts on student performance in WAEC and NECO Mathematics examinations. However, there is a dearth of research examining how these external factors have influenced academic achievement in Mathematics in the country and Benue State in particular. Thus, bridging this gap in knowledge is imperative for gaining insights into the evolving landscape of Mathematics education in the region and devising evidence-based interventions to support student learning and success.

1.3 Objectives of the study

The objective of this research work is to analyse the performance trends of students in WAEC/NECO Mathematics examinations from 2020 to 2023 in Makurdi L.G.A. Specifically, the study seeks:

- i. To analyse the performance trends of students in WAEC/NECO Mathematics examinations from 2020 to 2023 in Makurdi L.G.A.
- ii. To compare the performance levels of students in WAEC and NECO Mathematics examinations over the specified period in Makurdi L.G.A.
- iii. To identify potential factors influencing the performance variations observed in WAEC and NECO Mathematics examinations among students in Makurdi L.G. A.

1.4 Research Questions

- i. To what extent do students achievements in NECO mathematics differ from WAEC mathematics exams from the year 2020-2023

1.5 Test of Hypotheses

The following null hypotheses were formulated and tested at 0.05 alpha levels.

- **H1:** There is a significant difference in the performance trends of students in WAEC/NECO Mathematics examinations from 2020 to 2023

within Makurdi L.G.A.

- **H0:** There is no significant difference in the performance levels of students in WAEC and NECO Mathematics examinations over the specified period in Makurdi L.G.A.

2.0 Review of Related Work(Empirical Studies)

Oghenerume (2025) conducted a study titled “*Item Statistics Disparity between 2023 WASSCE and NECO SSCE Mathematics Large-Scale Assessments*” to compare the psychometric properties of WAEC and NECO Mathematics items among senior secondary school students in South Western Nigeria. The study aimed to evaluate disparities in item difficulty, discrimination, and reliability between the two exams for the year 2023. A quantitative, comparative research design was employed. Data were sourced from large-scale assessment reports and comprised responses from over 500 students across multiple public schools. The analysis utilized Item Response Theory (IRT), with emphasis on item characteristic curves and discrimination indices. Findings revealed that NECO Mathematics items were generally less difficult and more uniformly discriminative compared to WAEC, suggesting that students had higher chances of success in NECO. The study is relevant to the present research because it falls within the target timeframe and provides insight into item quality differences, which can influence comparative student achievement in standardized assessments.

Ohiri (2023) conducted a study titled “*Psychometric Analysis at Item Level of the WAEC May/June Mathematics Multiple Choice Questions Using the Classical Test Theory*” to analyze the quality of WAEC Mathematics questions administered between 2019 and 2021. The study was carried out among senior secondary school students in the South-East region of Nigeria. The study adopted a descriptive survey design and employed Classical Test Theory (CTT) for its analysis. The population included public secondary school students, and a sample of 300 SS3 students was randomly selected. WAEC multiple-choice Mathematics items were analyzed for their difficulty indices, discrimination power, and internal consistency using the Kuder-Richardson Formula 20 (KR-20). The findings revealed inconsistencies in item performance across years, with some questions failing to discriminate effectively between high- and low-performing students. Although the study did not involve NECO, it is relevant to the present research as it provides a baseline analysis of WAEC Mathematics standards within part of the target timeframe and supports comparative efforts regarding exam rigor and fairness.

Ibrahim (2023) conducted a study on the psychometric evaluation of Mathematics examinations titled “*Psychometric Properties Analysis of Mathematics West African Senior School Certificate Examination in Dala Education Zone, Kano State, Nigeria (2020–2022)*”. The study focused on the West African Senior School Certificate Examination (WASSCE) Mathematics items across a three-year period. A descriptive survey research design was employed. The population included all public secondary school students in the Dala Education Zone, with a purposive sample of 360 students who had attempted WAEC and NECO exams during the years under study. Classical test theory was applied to evaluate difficulty index, discrimination index, and reliability of the test items.

The results revealed that WAEC Mathematics items were more cognitively demanding than NECO items, with a lower pass rate recorded in WAEC across the three years. NECO items were more uniform and often assessed basic competencies. The study is relevant to the present research because it includes the 2020–2022 period, applies standard psychometric evaluation, and highlights performance disparities between WAEC and NECO, which is central to understanding trends in student achievement in Makurdi LGA.

Stanley and Amos(2020) carried out a study titled “*Comparative Analysis of Psychometric Properties of 2016 WAEC and NECO Mathematics Examination Items in Sabon Tasha Education Zone, Kaduna State.*” Although the data predates the 2020–2023 range, the methodological framework provides comparative insight for evaluating current WAEC and NECO standards. The research utilized a cross-sectional survey design. The population comprised all SS3 students in the Sabon Tasha Education Zone, and 310 students were randomly selected. Data were collected from the 2016 WAEC and NECO Mathematics exam items.

The study applied item analysis using Classical Test Theory to assess difficulty, discrimination, and reliability. The results indicated that NECO items were more straightforward and better structured in terms of internal consistency, whereas WAEC items were generally more difficult and inconsistent across items. Despite its earlier timeframe, the study is relevant to the current research for methodological guidance and its foundational findings on the difference in item construction and resulting student performance across the two examination bodies.

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Nguveren et al., (2025) conducted a study titled “*Assessing Item Parameter Drift of 2019–2022 National Examination Council Mathematics Essay Questions in Benue State, Nigeria*” to examine the consistency of NECO Mathematics exam content over time. The study was focused in Benue State, specifically using intact SS3 classes from Makurdi and other Local Government Areas. A descriptive research design was used. The population consisted of SS3 students in public secondary schools, and a total of 408 students were selected using purposive sampling.

Data were derived from NECO Mathematics Essay Questions administered from 2019 to 2022. Item-level analysis was performed using descriptive statistics and analysis of parameter drift across years. The study revealed a moderate drift in item structure, with questions from 2020 being particularly more complex—likely due to the post-COVID academic restructuring. The study is relevant to the present research because it is based in Benue State (including Makurdi), falls within the 2020–2023 timeframe, and provides insights into exam variability that directly affects student achievement comparisons between NECO and WAEC.

Aminu and Kassim (2023) conducted a study titled “*Basic Education Certificate Examination in Mathematics as Predictor in Science Subjects at the National Examinations Council in Nasarawa State, Nigeria.*” The study aimed to examine the predictive validity of BECE Mathematics results in relation to students' later performance in NECO Mathematics and science subjects. A correlational research design was adopted. The population comprised JSS3 students who sat for BECE in 2019 and continued to SSS3 by 2022. A sample of 320 students was selected using a multi-stage sampling technique.

The data included BECE and NECO Mathematics scores. Statistical analysis using Pearson's correlation and regression analysis was applied. Findings indicated that students who performed well in BECE Mathematics were more likely to perform better in NECO Mathematics, with higher reliability in NECO than WAEC outcomes. While not a direct comparison between NECO and WAEC, the study supports the reliability and predictive strength of NECO Mathematics, which is essential for interpreting comparative performance in current research.

Salihu and Abraham (2023) conducted a study titled “*Trend Analysis of Economics Students' Performance in NECO 2015–2022 in North-East Geopolitical Zone of Nigeria.*” Though the focus was on Economics, the methodology and findings offer applicable insights for trend-based performance studies in NECO subjects, including Mathematics. The study adopted a trend analysis research design. The population consisted of all students who sat for NECO Economics in the North-East between 2015 and 2022. A sample size of 600 students' results was drawn from five states using stratified sampling.

Descriptive statistics and trend graphs were used to analyze the data. Results showed fluctuating performance in NECO results, with a notable dip in 2020 and gradual recovery thereafter. While not Mathematics-specific, this study provides context for interpreting the impact of national disruptions (e.g., COVID-19) on standardized exam performance and supports trend analysis techniques applicable to the present research in Makurdi.

Afolabi and Adeoye (2021) conducted a study on the comparative analysis of student performance in WAEC and NECO Mathematics among senior secondary school students in Lagos State, Nigeria. The study aimed to investigate the performance disparity between students who took WAEC and those who took NECO Mathematics examinations from 2020 to 2021. The study was guided by three research questions and one hypothesis. A descriptive research design was employed. The population consisted of 2,500 students, and a sample of 250 students was selected using stratified random sampling. Data were collected using students' result records and analyzed using descriptive statistics and t-test. The findings revealed a significant difference in performance, with students performing better in NECO Mathematics than in WAEC. The study is relevant to the present research because it highlights the performance trends within a similar timeframe and adopts a comparable research design.

Yusuf and Ojo (2022) examined the influence of school type on students' performance in WAEC and NECO Mathematics in Oyo State. The study explored whether the type of school (public or private) had a significant effect on students' achievements in the two examinations between 2020 and 2022. Four research questions and two hypotheses guided the study. An ex-post facto research design was used, and the population comprised 1,800 students. A sample of 200 students was selected through purposive sampling. Data were analyzed using ANOVA. The study found that private school students outperformed their public school counterparts in both WAEC and NECO, with the margin being wider in WAEC. This study is pertinent to the current research as it provides insights into the factors influencing performance disparities in WAEC and NECO exams.

Adamu and Suleiman (2020) investigated the effect of socio-economic status on students' performance in WAEC and NECO Mathematics in Kano State. The study aimed to determine whether students' socioeconomic backgrounds influenced their performance in the two examinations. The study was guided by two research questions and one hypothesis. A correlational research design was adopted. The population consisted of 3,000 students, and a sample of 300 students was selected through random sampling. Data were collected through a structured questionnaire and analyzed using Pearson's correlation coefficient. The findings indicated a positive correlation between socio-economic status and performance in both WAEC and NECO, with a stronger correlation observed in WAEC results. This study is relevant to the current research as it examines socio-economic factors that may contribute to performance differences in the two exams.

Okafor and Nwankwo (2021) conducted a comparative study of gender differences in WAEC and NECO Mathematics performance in Anambra State. The study sought to determine whether there were significant gender differences in the performance of students in the two examinations between 2020 and 2021. Three research questions and one hypothesis guided the study. A descriptive survey design was employed. The population included 2,200 students, and a sample of 220 students was selected using a simple random sampling technique. Data were analyzed using chi-square statistics. The study found no significant gender differences in NECO Mathematics performance, while WAEC results showed a slight male advantage. This study is relevant to the present research as it investigates gender as a factor influencing performance in WAEC and NECO.

3.0 Methodology

3.1 Research Design

The researcher employs an ex-post facto design, which is appropriate as data was collected after the events or phenomena under investigation. This study focuses on past outcomes from the WAEC and NECO examinations conducted from 2021 to 2023, making this design suitable.

3.2 Area of Study

The researcher focuses on public schools located in the Makurdi Local Government Area of Benue State. As the capital of Benue State, Makurdi serves as the local government headquarters. The area transitioned from a Native Authority in 1970, leading to the creation of Gwer, Guma, and Gwer West Local Government Areas.

Makurdi Local Government Area, spanning 16 kilometers, has eleven council wards. Its population grew from approximately 300,377 (2006 census) to an estimated 433,700 by 2022. The area includes two constituencies: Makurdi South, which encompasses Ankpa/Wadata, Bar Modern Market, Fiidi, and

Wailomayo wards, and Makurdi North, which includes Agan, Mbalagh North Bank1 and North Bank2, Clerk/Market, and the Central South Mission. Both constituencies are positioned near the narrow end of the River Benue, where a rail bridge is under construction.

In addition to being the state capital, Makurdi is a hub for government activities and commercial transactions, serving as a crucial highway connecting the northern and southern regions of Nigeria. The town has a diverse population, with the Tiv tribe being the majority, alongside other ethnic groups such as the Idoma, Hausa, Ibo, Yoruba, Jukun, Nupe, Kabawa, Etulo, and Alago.

3.3 Population of Study

The population for this study consists of all public secondary school students in the Makurdi Local Government Area of Benue State who participated in the WAEC and NECO examinations between 2020 and 2023. Out of 2,174 students whose results were analyzed, 1,279 took the WAEC exams, while 895 took the NECO exams. This population was sourced from three public secondary schools in Makurdi Local Government.

3.4 Sample and Sampling Methods

Multi-stage sampling occurs when multiple sampling techniques are employed at various stages of the research process. This method allows for effective stratification along multiple variables.

According to Adekeye and Apeh (2019), multi-stage sampling is particularly useful in social science research, where the population may be too large to study in its entirety. In their study, they demonstrated the application of multi-stage sampling by purposively selecting certain groups at the first stage, followed by random sampling within those groups at subsequent stages. This approach enhances the representativeness of the sample while also addressing logistical challenges associated with large populations.

For this study, three public secondary schools were selected from a total of 62 schools in Makurdi Local Government Area. The chosen schools are:

- Tilley Gyado College, Makurdi
- Special Science Senior Secondary School, Makurdi
- Command Day Secondary School, North Bank, Makurdi

Accidental sampling was employed due to the uncooperative nature of many schools, focusing only on those that were willing to participate.

3.5 Instrument

The research utilized the analysis of WAEC and NECO mathematics results from the years 2021 to 2023 as the primary data collection tools.

3.6 Validation of Instrument

The design of the data collection instrument was thoroughly reviewed and approved by the study supervisor.

3.7 Data Collection Method

Data necessary for this study was obtained from the academic offices of the selected secondary schools.

3.8 Data Analysis Method

Descriptive statistics, including percentages and frequencies, were employed to address the research questions. This approach will illustrate the extent of variation in the outcomes of the WAEC and NECO mathematics examinations. Additionally, the hypothesis was tested at a 5% significance level using the chi-square test.

4.0 DATA PRESENTATION, ANALYSIS, INTERPRETATION

4.1 Data Presentation

Table 1: ANALYSIS OF 2020 - 2023 WAEC SSCE RESULT OF TILLEY GYADO COLLEGE, MAKURDI

YE AR	DISTINCT ION				CREDIT				PAS S							
S/N	A 1	B 2	B 3	TOT AL	C 4	C 5	C 6	TOT AL	D7	E8	TOT AL	FA IL	NO. SAT	NO. WITHELD	NO. PASS	% PASS
2020	0	0	3	3	2	7	5	14	20	7	27	4	49	2	43	88%
2021	0	3	2	5	4	3	12	19	10	11	21	2	47	0	45	95%
2022	0	0	2	2	4	4	1	21	8	4	12	8	44	1	35	79%

2							3										
2023	1	0	0	1	3	8	11	20	9	20	29	2	52	0	50	96%	

Table 2: ANALYSIS OF 2020 - 2023 NECO SSCE RESULT OF TILLEY GYADO COLLEGE, MAKURDI

YEA R	DISTINCTI ON				CREDIT				PAS S							
S/N	A 1	B 2	B 3	TOT AL	C 4	C 5	C 6	TO TA L	D7	E8	TOT AL	FA IL	NO. SAT	NO. WITHELD	NO. PASS	% PASS
2020	0	3	6	9	1 2	4	3	19	3	5	8	0	36	0	36	100%
2021	0	5	4	9	9	5	14	28	3	1	4	1	42	0	41	97%
2022	1	1	0	2	3	4	12	19	5	4	9	0	30	0	30	100%
2023	0	3	7	10	4	8	11	23	3	5	8	0	41	0	41	100%

Table 3: ANALYSIS OF 2020- 2023 WAEC SSCE RESULT OF SPECIAL SCIENCE SENIOR SECONDARY SCHOOL

YEA R	DISTINCTI ON				CREDIT				PASS							
S/N	A 1	B 2	B 3	TOT AL	C 4	C 5	C 6	TOT AL	D7	E8	TOT AL	FAI L	NO. SAT	NO. WITHELD	NO. PASS	% PASS
2020	0	2	0	2	3	3	5	11	19	13	32	3	48	0	44	91%
2021	0	1	3	4	5	1	11	17	11	8	19	1	41	0	40	97%
2022	0	0	2	2	4	7	13	24	5	12	17	8	52	1	43	82%
2023	0	0	0	0	3	2	7	12	21	16	37	4	43	0	39	90%

Table 4: ANALYSIS OF 2020- 2023 NECO SSCE RESULT OF SPECIAL SCIENCE SENIOR SECONDARY SCHOOL

YEA R	DISTINCTI ON				CREDIT				PAS S							
S/N	A 1	B 2	B 3	TOT AL	C 4	C 5	C 6	TOT AL	D7	E8	TOT AL	FA IL	NO. SAT	NO. WITHELD	NO. PASS	% PASS
2020	0	2	5	7	1 3	3	6	22	2	1	3	0	32	0	32	100%
2021	0	3	4	7	8	3	1 5	26	2	0	2	1	36	0	35	99%
2022	3	1	1	5	2	5	1 3	20	6	3	9	0	34	0	34	100%
2023	5	3	1	9	3	8	1 0	21	2	6	38	0	38	0	38	100%

Table 5: ANALYSIS OF 2020- 2023 WAEC SSCE RESULT OF DEMONSTRATION SCHOOL

YEA R	DISTINCTI ON				CREDIT				PASS							
S/N	A 1	B 2	B 3	TOT AL	C 4	C 5	C 6	TOT AL	D7	E8	TOT AL	FAI L	NO. SAT	NO. WITHELD	NO. PASS	% PASS
2020	0	0	0	0	4	2	2	8	22	17	39	6	53	0	47	98%
2021	0	3	6	9	2	4	4	10	5	5	10	6	35	0	29	82%
2022	0	0	2	2	6	4	1 2	22	4	10	14	6	44	0	38	86%
2023	0	0	0	0	6	0	4	10	20	19	39	3	53	1	49	92%

Table 6: ANALYSIS OF 2020- 2023 NECO SSCE RESULT OF DEMONSTRATION SCHOOL

YE AR	DISTINCTI ON			CREDIT				PAS S								
S/N	A	B	B	TOT	C	C	C	TOT	D7	E8	TOT	FA	NO.	NO.	NO. PASS	% PASS
	1	2	3	AL	4	5	6	AL			AL	IL	SAT	WITHELD		
2020	1	1	8	10	1	4	4	20	1	0	1	0	31	0	31	100%
2021	0	4	1	21	3	2	1	6	1	0	1	0	28	0	28	100%
2022	2	2	0	4	5	5	1	22	7	0	7	0	33	0	33	100%
2023	4	3	1	8	1	6	4	21	6	2	8	2	39	0	37	95%

4.2 Data Analysis & Interpretation

Table 7: WAEC/NECO Result Analysis for Tilley Gyado College Makurdi in the Years 2020-2023

Examination bodies	%Pass	%Fail
WAEC	89.50	10.50
NECO	99.25	0.75

Note: In the table above Persons with A1-E8 are regarded as Pass while Students with withheld results and F are regarded as fail.

From the table Above WAEC has 89.50% pass in the Mathematics Examinations Conducted in the years 2020 -2023 while NECO has 99.25% pass in the same years which shows a little percentage Pass higher than that of WAEC.

Table 8: WAEC/NECO Result Analysis for Special Science Secondary School, Makurdi in the Years 2020-2023

Examination bodies	%Pass	%Fail
WAEC	90.00	10.00
NECO	99.75	0.25

From the table Above WAEC has 90.00% pass in the Mathematics Examinations Conducted in the years 2020 -2023 while NECO has 99.75% pass in the same years which shows a little percentage Pass higher than that of WAEC.

Table 9: WAEC/NECO Result Analysis for Demonstration Secondary School, Makurdi in the Years 2020-2023

Examination bodies	%Pass	%Fail
WAEC	89.50	10.50
NECO	98.75	1.25

From the table Above WAEC has 89.75% pass in the Mathematics Examinations Conducted in the years 2020 -2023 while NECO has 98.75% pass in the same years which shows a little percentage Pass higher than that of WAEC.

Table 10: Chi-Square

School names	WAEC %passes	WAEC %fails	NECO %passes	NECO %fails	Total
Tilley Gyado	89.50	10.50	99.25	0.75	200
Special Science	90.00	10.00	99.75	0.25	200
Demonstration Secondary School	89.50	10.50	98.75	1.25	200
TOTAL	269	31	297.75	2.25	600

Observed frequency(O): These are the values given in the table

Expected Frequencies(E): use the formula for each cell

$$E = \frac{(\text{Row Total} \times \text{Column Total})}{\text{Grand Total}}$$

Table 11: Expected Frequencies

School names	WAEC %passes	WAEC %fails	NECO %passes	NECO %fails	Total
TILLEY GYADO	89.50(89.67)	10.50(10.33)	99.25(99.25)	0.75(0.75)	200
SPECIAL SCIENCE	90.00(89.67)	10.00(10.33)	99.75(99.25)	0.25(0.75)	200

DEMONSTRATION SECONDARY SCHOOL	89.50(89.67)	10.50(10.33)	98.75(99.25)	1.25(0.75)	200
TOTAL	269	31	297.75	2.25	600

To calculate Chi-square, we use.

$$X^2 = \sum \frac{(O - E)^2}{E} \text{ where}$$

Chi-square = X^2

Observed frequency = O

Expected Frequencies = E

$$X^2 = 0.00032 + 0.0028 + 0 + 0 + 0.0012 + 0.0105 + 0.0025 + 0.3333 + 0.00032 + 0.0028 + 0.0025 + 0.3333$$

$$X^2 = 0.69$$

The Chi-square X^2 for the three schools under study yield $X^2_{cal} = 0.69$ and for the tabulated value $X^2_{tab} = 12.59$ for the degree of freedom of 6 and $\alpha = 0.05$.

The researcher accepts the Null hypothesis which says there is no significant difference between the student's achievement in WAEC and NECO Mathematics Examinations.

5.0 Discussions

The analysis of results obtained by both WAEC and NECO has been treated in such a way as to provide answer to the research question and the hypothesis. The researcher is quick to identify through the research that students' general performances in both examinations has improved significantly considering previous studies under review.

The research question was answered through the use of percentages and chi-square. As observed in Tables 1 to 11, the average student's percentage performances in WAEC stood at 89.67% while that of NECO Mathematics students achievement stood at 99.25%. It is quite obvious that students performed better in NECO compared to WAEC even though the differences in percentages is not quite significant. This study highlights a trend of better performance in NECO compared to WAEC, a finding that is supported by other research. For example, some scholars have attributed this trend to the perceived difference in difficulty between the examinations. Akpan & Ekanem (2015) found that students performed better in NECO exams due to the exam's relative simplicity, compared to WAEC, which is considered to be more rigorous and comprehensive. The difference in student performance can also be explained by the fact that NECO is a more recent exam body and its standards are sometimes viewed as more accessible. In contrast, Adebayo et al. (2018) observed a similar trend but attributed the results not only to exam difficulty but also to curriculum coverage and the time frame within which students prepare for these examinations. Their study revealed that schools often focus more on preparing students for WAEC as it is the older and more widely accepted exam for university admission. Consequently, students may experience burnout by the time they sit for NECO, leading to the perception that NECO is an easier exam. This study found a slight but statistically significant difference in student performance in favour of NECO, though, like in this present study, the differences in percentages were not deemed substantial. However, Onyebuchi (2019) presented findings that differed from the results of your study. In their research, WAEC performance was slightly better than NECO in the same subject (Mathematics). The study pointed out that schools sometimes allocate more experienced teachers for WAEC preparation, and students might exert more effort on WAEC since it has broader acceptance for tertiary education placements.

The world today depends on education for its development and mathematics been the bedrock of technology, one could believe that Makurdi metropolis is doing very well in Mathematics education and hence secondary schools' students in the area may not find it difficult to get admission into institutions of higher learning with the performance put forward.

6.0 Conclusion

The study examined students' performance in WAEC and NECO Mathematics examinations within secondary schools in Makurdi metropolis. Findings indicate that students demonstrated a consistent level of achievement across both examinations, suggesting comparable academic standards and effective instructional delivery by the schools. The results highlight the commendable efforts of teachers and school administrators in preparing students for national assessments in Mathematics. Moreover, the outcomes reflect the impact of institutional commitment, structured exam preparation, and learner engagement. While slight variations in performance were observed, these differences appear to be shaped more by contextual and preparatory factors than by the structure of the examinations themselves. The study affirms the capability of schools in Makurdi to equip students for academic success across multiple examination platforms.

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