Assessment of Impact of Free Education on The Academic Performance of Secondary School Students in Adamawa State Nigeria

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Abstract
This study was the evaluation of free education on the academic performance of secondary school students in Adamawa state Nigeria. The study was conducted in five secondary schools namely, Government Day secondary school Gwadabawa, Government Day secondary school Karewa, Government Day secondary school Bekaji, Capital secondary school and Government Day secondary school Luggere, located in Yola North, Adamawa State, Nigeria. A descriptive survey research design was used in the study. The sample size for the study was all the students that graduated in 2019 and 2020 in the five selected schools. Purposive sampling techniques were used to obtain respondents from each school. One research instrument was used to collect data for this study by the researcher. The result shows that free education policies in Adamawa State have had a generally positive impact on access to education and improved academic performance. Based on the findings, some recommendations were made.

1. Introduction

Education plays a vital role in the development of individuals and societies, serving as a catalyst for economic growth and social progress (Nwoburuoke & Eremie, 2021). Recognizing the importance of education, governments worldwide have introduced various policies aimed at improving access to and the quality of education (Duflo & Kremer, 2021). According to Filgona and Sakiyo (2020), One such policy initiative is the provision of free education, which seeks to eliminate financial barriers and provide children with greater opportunities to access quality education. In Nigeria, free education policies have received considerable attention, particularly in Adamawa State, as part of efforts to expand educational opportunities. However, despite the potential benefits of these policies, it is important to examine their actual effects on students' academic performance (Takwate et al., 2019). Free education initiatives aim to eliminate or reduce financial barriers that may prevent students from accessing education (Fareo & Musa, 2018). Orluwene (2015). Free education initiatives seek to eliminate or reduce tuition fees and other related expenses that may prevent students from accessing education. By reducing these

financial barriers, such initiatives have the potential to increase enrolment, reduce school dropout rates and promote educational equity. Furthermore, reducing the financial burden on families may enable them to allocate more resources to other educational needs, including textbooks and learning materials. However, the extent to which free education improves students' academic performance depends on the availability of adequate educational resources and the quality of teaching and learning (Francis, 2019). Several studies have explored the relationship between free education and academic performance (Suherda & Amin, 2019; Nyakoe, 2020; Nwoburuoke & Eremie, 2021). For example, a study conducted in a country that implemented free education policies found a significant increase in enrolment rates and improved student performance (Earle et al., 2018). Another study in a different context revealed that the introduction of free education resulted in a decrease in dropout rates and an increase in students' completion of secondary education (Espinoza et al., 2023). These findings suggest a positive correlation between free education and academic performance, emphasizing the potential of such policies to enhance educational access and equity. Although free education has demonstrated positive effects in some contexts, it is important to acknowledge the challenges associated with its implementation. The removal of tuition fees may place additional pressure on educational resources, particularly when increased student enrolment is not matched by adequate funding, infrastructure and teaching personnel. This may result in overcrowded classrooms and potentially compromise the quality of education. Furthermore, the long-term financial sustainability of free education initiatives and their implications for government expenditure remain important considerations (Hampden-Thompson & Galindo, 2017). To broaden the analysis, this study will also examine the experiences of countries that have adopted free education policies. For instance, Finland, which is widely recognised for its high-quality education system, provides free education from pre-primary to upper secondary levels, including general and vocational education, for students covered by its compulsory education system (Ustun & Eryilmaz, 2018). Research on Finland's education system indicates that free education has contributed to its success by ensuring equal access and supporting a culture of educational excellence (Linnakylä et al., 2010). Additionally, examining countries such as Germany, which provides largely tuition-free higher education, can offer valuable insights into the potential long-term benefits and challenges of free education policies (Barr, 2020). In Nigeria, the research studies conducted in different states of Nigeria highlighted the complex relationship between free education policies and academic performance among secondary school students (Anihenya & Agah, 2021). While free education initiatives in Lagos State were associated with increased enrolment and other positive outcomes, findings from Kano State indicate that such policies require complementary measures to address persistent challenges in funding, infrastructure, teacher supply, and learning quality (Francis, 2019). These studies emphasize that free education must be accompanied by adequate resources, improved teacher training, and better infrastructure to support optimal academic performance among secondary school students across Nigeria. This study contributes to ongoing global debates on free education, in which policymakers, researchers, and educators consider its implications for access, equity, cost, and educational quality. By providing empirical evidence, this research seeks to support evidence-based decision-making and deepen understanding of how free education may affect academic performance. The findings may inform policy formulation and implementation, thereby supporting more effective educational reforms and improved access to quality education for all. This study aims to evaluate the impact of free education on the academic performance of secondary school students in Adamawa State, Nigeria. Adamawa State has faced education-sector challenges, including limited access to quality education, inadequate infrastructure, and socio-economic disparities. In response, the state government introduced a free education policy in 2019 for public primary and secondary schools. The policy seeks to reduce financial barriers by removing tuition and related school

fees, complemented by support such as learning materials, uniforms, and examination-fee assistance for eligible students. By improving access to education, the government aims to enhance educational outcomes and contribute to improved socio-economic conditions.

2. Statement of the Problem

Education is widely recognized as a fundamental human right and an important driver of individual and societal development. In Nigeria, as in many developing countries, access to quality education remains a significant challenge. In recent years, Adamawa State has taken steps to address this issue by implementing a free education policy for public primary and secondary schools. While free education is a positive step towards expanding access, it is essential to evaluate its impact on the academic performance of secondary school students.

The implementation of free education in Adamawa State raises important questions about its influence on the academic performance of secondary school students. Although the policy aims to improve access to education, it is necessary to examine its implications for educational quality, including teaching effectiveness, instructional materials, and school infrastructure. Increased enrolment may also place pressure on existing facilities and teaching personnel, potentially resulting in overcrowded classrooms and higher student–teacher ratios. Furthermore, it is important to determine whether free education improves students' motivation, attendance, and engagement, thereby contributing to better academic performance. Socio-economic factors, such as household poverty, parental educational background, and access to learning resources at home, may also influence academic achievement. Therefore, understanding how these factors interact with the implementation of free education is essential for assessing its overall influence on students' academic performance in Adamawa State?

3. Aim and Objectives of the Study

The main objective of the study is to evaluate the impact of free education on the academic performance of secondary school students in Adamawa state Nigeria. Specifically, the study pursued to:

i. Assess the extent to which free education policies have improved access to education in Adamawa State.
ii. Examine the impact of free education on the academic performance of secondary school students in Adamawa State.
iii. Identify the factors influencing the effectiveness of free education policies in Adamawa State.
iv. Provide recommendations for enhancing the effectiveness of free education policies in Adamawa State.

4. Theoretical Framework

The theoretical framework for this study is based on Human Capital Theory propounded by Gary Becker in (1964). The theory is used to guide the study.

4.1 *Human capital theory*

In the context of evaluating the impact of free education on the academic performance of secondary school students in Adamawa State, Nigeria, the Human Capital Theory provides a comprehensive framework to understand the potential outcomes and benefits of investing in education. The theory suggests that providing free education to students can lead to several positive effects, including improved academic performance, increased human capital accumulation, and enhanced future economic opportunities. Firstly, the theory argues that free education can lead to improved academic performance. When education is made more accessible and affordable through policies such as free education, more students can enrol in schools and pursue their education. This increased access to education can potentially result in

higher student enrolment rates, lower dropout rates, and better attendance. As a result, students may have more opportunities to acquire knowledge and skills, leading to improved academic performance. Moreover, the theory suggests that free education can enhance human capital accumulation. Human capital refers to the stock of skills, knowledge, and abilities that individuals possess. By providing free education, students from disadvantaged backgrounds who may not have had access to quality education otherwise can now acquire the necessary skills and knowledge to enhance their human capital. This, in turn, can contribute to their long-term economic prospects and social mobility. In the case of Adamawa State, Nigeria, where free education is being implemented, the Human Capital Theory predicts that more students would have the opportunity to receive an education, especially those from lower-income families who may have faced financial barriers in the past. As a result, the theory suggests that the academic performance of secondary school students in Adamawa State could potentially improve, leading to better educational outcomes and increased human capital accumulation. However, it is important to note that the impact of free education on academic performance is contingent on various factors. One such factor is the quality of education provided. While free education can increase access, the quality of education plays a crucial role in determining its effectiveness. Adequate infrastructure, qualified teachers, and a well-designed curriculum are essential components of quality education. Therefore, it is important to consider not only the provision of free education but also the measures taken to ensure the quality of education in Adamawa State.

4.2 *The concept of free education*

Education is a fundamental right and a powerful tool for personal growth and societal development. It empowers individuals, promotes social mobility, and fosters economic progress (Olang'o et al., 2021). However, access to quality education remains a challenge for many due to financial barriers. The concept of free education has gained considerable attention in recent years as a potential solution to bridge this gap.

Free education refers to a system in which the cost of education, including tuition fees, textbooks, and other related expenses, is borne by the state or other funding sources, relieving students of financial burdens (Kazuzuru, 2020). According Nwoburuoke and Eremie (2021), free education aims to ensure that every individual, regardless of their socioeconomic background, has equal access to education. Free education can be implemented at various levels, including primary, secondary, and tertiary education, and it encompasses both public and private educational institutions (Orluwene, 2015). Therefore, the provision of free education offers numerous advantages. It promotes social equity by eliminating financial barriers and ensuring equal access to education for all. This can help break the cycle of poverty and contribute to more inclusive societies. Also, free education enhances educational attainment rates, as students are not constrained by their financial circumstances (Duflo & Kremer, 2021). Higher levels of education can lead to improved job prospects, higher income levels, and enhanced social mobility. Moreover, free education encourages a diverse student body, fostering cultural exchange and promoting tolerance and understanding among individuals from different backgrounds (James et al., 2020).

While providing free education incurs costs, it can yield significant long-term economic benefits (Arabo & Boniface, 2017). An educated population tends to have higher productivity levels, leading to economic growth and development. Free education creates a skilled workforce, reducing unemployment rates and creating opportunities for innovation and entrepreneurship (Lawson & Ayuba, 2022). Implementing free education is not without its challenges. One major concern is the financial burden on the state. Funding a free education system requires substantial resources, and governments must carefully allocate their budgets to ensure sustainable financing (Nyakoe, 2020). Moreover, the quality of education should not

be compromised in the pursuit of free education. Adequate investments in infrastructure, teacher training, and educational resources are crucial to maintain high educational standards. According to Francis (2019), to address the financial challenges of free education, governments can explore various funding models. This may include reallocating existing resources, implementing progressive taxation systems, or seeking partnerships with private entities and philanthropic organizations. Also, policymakers should focus on creating an efficient and transparent education system that optimizes resource allocation and ensures accountability (Nyakoe, 2020). By fostering collaboration between government, academia, and the private sector, sustainable funding solutions can be devised.

The concept of free education holds immense potential for transforming societies and unlocking opportunities for individuals. By eliminating financial barriers, free education promotes social equity, enhances educational attainment, and contributes to economic development.

4.3 *The concept of students' academic performance*

The concept of students' performance is a crucial aspect of education that encompasses various indicators of a student's academic achievements, skills, and abilities (York et al., 2015). Performance evaluation provides educators, parents, and policymakers with insights into the effectiveness of educational systems and helps identify areas that require improvement (Leithwood et al., 2010). Students' performance is commonly measured through assessments, tests, assignments, and other evaluations. These measurements provide a snapshot of a student's understanding of the curriculum, their ability to apply knowledge, and their overall growth (Kuh et al., 2011). According to Kunter et al., (2013) assessing students' performance involves more than just assigning grades; it requires a comprehensive understanding of the multifaceted nature of learning. While traditional tests and exams play a significant role in evaluating students' performance, it is essential to consider alternative forms of assessment. Projects, presentations, group work, and practical demonstrations offer additional opportunities to assess students' performance holistically (Semeraro et al., 2020). These methods enable educators to evaluate critical thinking skills, problem-solving abilities, creativity, communication skills, and collaborative work, which are essential for success in the real world. By incorporating diverse assessment strategies, educators can capture a broader range of students' abilities and provide a more comprehensive evaluation (Fink, 2013).

Students' performance extends beyond academic achievements and encompasses social and emotional development as well (Filgona & Sakiyo, 2020b). A holistic approach to performance assessment acknowledges that students' well-being, interpersonal skills, and emotional intelligence significantly impact their overall success (Chang & Muñoz, 2017). Assessing students' social and emotional development involves evaluating their ability to manage emotions, build relationships, exhibit empathy, and make responsible decisions (Thomas, 2012). By integrating social and emotional learning into performance evaluations, educators can support students' holistic growth and help them develop the necessary skills to thrive in their personal and professional lives (Awodoyin, 2020).

4.4 *The concept of secondary school*

Education plays a vital role in shaping individuals and societies. One crucial stage in this journey is secondary school, a pivotal period that bridges the gap between primary education and higher education or the workforce. Secondary school, also known as high school or middle school in certain regions, typically caters to students aged 12 to 18. It is a critical phase of development that equips young minds with essential knowledge, skills, and values necessary for their personal growth and future success. Secondary school serves as a crucial steppingstone in a student's educational journey, providing a structured learning environment and a

comprehensive curriculum (James et al., 2020). Secondary schools aim to develop students' academic abilities across various subjects, enhance their analytical and problem-solving skills, and promote social interaction and teamwork (Anihenya & Agah, 2021).

The secondary school curriculum typically comprises a wide range of subjects, including mathematics, sciences, languages, social sciences, arts, and physical education (Duflo & Kremer, 2021). The curriculum is designed to provide a balanced education, ensuring students have a solid foundation in core subjects while also offering opportunities to explore their interests and talents. This diversity allows students to discover their strengths and potential career paths. Furthermore, the curriculum often evolves to incorporate contemporary issues and emerging fields of study, equipping students with up-to-date knowledge and relevant skills (Orluwene, 2015). Secondary schools also offer a host of extracurricular activities alongside the academic curriculum to foster holistic development (Siperstein et al., 2017). These activities can include sports teams, clubs, music and arts programs, debate societies, and community service initiatives. Participating in extracurricular activities allows students to pursue their passions, develop leadership skills, enhance teamwork abilities, and build a sense of community (Mathie & Wals, 2022).

4.5 *Influence of free education on access to education*

Free education has been widely recognized as a powerful tool for promoting social mobility and reducing inequality. However, the influence of socioeconomic factors on the provision and effectiveness of free education cannot be overlooked (Duflo & Kremer, 2021).

The cost of education beyond the basic level, such as university tuition fees, textbooks, and other associated expenses, poses significant barriers for low-income individuals. As a result, students from affluent families have a greater advantage in accessing quality education, perpetuating a cycle of inequality (Earle et al., 2018). While free education aims to provide equal opportunities for all, the quality of education can be influenced by socioeconomic factors. Schools in poor areas often lack adequate resources, including qualified teachers, modern facilities, and educational materials (Suherda & Amin, 2019). This disparity in resource allocation creates an educational disadvantage for students from lower socioeconomic backgrounds.

5. Empirical Studies on Free Education

Kazuzuru, (2020) conducted a study to examine impact of free education policy for secondary schools' academic performance in Tanzania. Academic performance of a secondary school was measured as percentage of students who passed a national form examination with at least division four. Data were taken from the National Examination Council of Tanzania website for students who took their national form four examinations in 2014 and 2018. The study employed a difference in difference method to assess the impact of free education policy on secondary schools' academic performance. The results indicate that the free education policy, despites increasing enrolment of students it is yet to bring negative examination performance. Much as free education policy has other advantages like increasing education access and promoting equality, the government should keep the policy live while keeping an eye on schools' performance. Specifically, the government should strengthen school facilities availability, notably chairs, desks and classrooms, as well as keeping incentives for schoolteachers.

Olang'o et al., (2021) conducted a study to investigate the influence of free day secondary education (FDSE) policy on academic performance of rural public day secondary schools (RPDSS) in Kilifi County, Kenya. The study adopted descriptive survey research design and a sample of 375 subjects was considered sufficient. Structured questionnaires and interview schedules were used to collect data from principals, teachers, and education directors. Data on performance and enrolment were collected through document analysis. Reliability of the

instruments was ascertained through test and retest method that yielded a correlation coefficient of 0.83, an indication of reliable instruments. The study found out that there was a decrease in school mean score between 2003-2007 and 2013-2017. There was a strong positive correlation (r = 0.93) between enrollment and poor performance. Further, learning resources and student finances were inadequate. The study recommends a reduction in class size, timely disbursement, and increased students' capitation.

6. Research Design

The design used for this study was a descriptive survey research design. The purpose for using it is because it can determine the significance result measure from the overall population and is an efficient way of gathering data to help address a research question. Bambi (2021) opines on descriptive survey design that, is a method usually adopted when handling a large population especially on the issue of the moment that involves the systematic collection of data from the population of study through the use of the questionnaire. Friday (2020) asserts that the information gathered will allow you to measure the significance of your result on the overall population you are studying, as well as the challenges of your respondents' opinions.

7. Area of the Study

The study was conducted in Yola North Local Government Area of Adamawa State, located in northeastern Nigeria. The area lies between latitudes 9°13′ and 9°19′N and longitudes 12°19′ and 12°28′E, covering an estimated land area of 111.85 km^2.

8. Population of the study

The target population for this study comprises students who graduated from the five government-owned secondary schools in Yola North Local Government Area of Adamawa State.

9. Sample and Sampling Technique

The study population comprised students who graduated in 2019 and 2020 from the five public secondary schools in Yola North Local Government Area of Adamawa State. Guided by Awodoyin (2020), who emphasized the importance of an adequate and representative sample, a multistage sampling technique involving proportional allocation and random selection was adopted to select participants for the study.

10. Instrument for Data Collection

A research instrument is a tool used to collect relevant data to achieve the objectives of a study (Khalifa, 2012). This study used interviews with school examination officers to obtain data on students' performance in the West African Senior School Certificate Examination (WASSCE) in 2019 and 2020.

11. Method of Data Analysis

The data of WAEC result statistics for 2019 and 2020 was collected from the exams officers of the selected schools.

12. Results and Discussion

The results were obtained from records available in the school from the exams officers. The data gathered were presented for each school in tabular form.

Table 1: Capital Day Secondary School, Jimeta, 2023 WAEC Result

S/No	Number of credits	Before free education Number of students	During free education Number of students
1	9 credits	0	8
2	8 credits	0	19
3	7 credits	3	42
4	6 credits	2	59
5	5 credits	2	68
6	4 credits	20	90
7	3 credits	33	83
8	2 credits	33	58
9	1 credit	16	29
10	0 credit	47	51
	Total	**156**	**507**

Source: School exams records

Table 1 presents a comprehensive overview of the performance of Capital Day Secondary School students in the West African Examinations Council (WAEC) for the years 2019 and 2020, with a focus on the number of credits obtained. In 2019, prior to the implementation of free education, the data reveals the total number of students is 156, with zero students getting 9 credits and about 47 students having zero credit while in 2020 during the free education era, the number of students has increase to 507 students with 8 students having 9 credits. Though, the number of students having zero credits have increase to 51 during the 2020 free education. The data suggests that there was an improvement in the performance of students during the year of free education in Capital Day Secondary School. There was an increase in the number of students achieving higher grades (7 credits or more), and more students were able to take the exam, as indicated by the increase in the total number of students. However, it's essential to consider that there were still a significant number of students with 0 credits in 2020. Nonetheless, the overall trend indicates a positive impact of free education on student performance.

Table 2: Government Day Secondary School Karewa, 2023 WAEC Result

S/No	Number of credits	Before free education Number of students	During free education Number of students
1	9 credits	0	0
2	8 credits	4	0
3	7 credits	3	2
4	6 credits	10	1
5	5 credits	9	1
6	4 credits	6	0
7	3 credits	3	0
8	2 credits	1	0
9	1 credit	2	0
10	0 credit	0	0
	Total	**38**	**4**

Source: School exams records

Table 2 show the WAEC results for Government Day Secondary School Karewa in 2019 and 2020. Before free education in 2019, there were 38 students, with varying credit levels, but none achieved 9 or 8 credits. In 2020, during free education, only 4 students took the exam, and none scored 9 or 8 credits. While the number of students with lower credits increased in 2020, there was a significant decrease in the total number of students taking the exam, indicating potential challenges in implementing free education or lower interest in the WAEC exams.

Table 3: Government Day Secondary School Bekaji, 2023 WAEC Result for

S/No	Number of credits	Before free education Number of students	During free education Number of students
1	9 credits	No data	No data
2	8 credits	No data	No data
3	7 credits	No data	No data
4	6 credits	No data	No data
5	5 credits	No data	No data
6	4 credits	No data	No data
7	3 credits	No data	No data
8	2 credits	No data	No data
9	1 credit	No data	No data
10	0 credit	No data	No data
	Total	No data	No data

Source: School exams records

Table 3 provide WAEC results for Government Day Secondary School Bekaji in 2019 and 2020, before and during free education. However, no specific data is given, making it impossible to discuss the results or draw any conclusions about the impact of free education on student performance.

Table 4: Government Day Secondary School Luggere WAEC Result for

S/NO	Number of credits	Before free education Number of students	During free education Number of students
1	9 credits	No data	No data
2	8 credits	No data	No data
3	7 credits	No data	No data
4	6 credits	No data	No data
5	5 credits	No data	No data
6	4 credits	No data	No data
7	3 credits	No data	No data
8	2 credits	No data	No data
9	1 credit	No data	No data
10	0 credit	No data	No data
	Total	No data	No data

Source: exams records (WAEC) 2023

Table 4 shows the WAEC results for Government Day Secondary School Luggere in 2019 and 2020. There is no specific data provided for the number of students who achieved each level of credits, making it impossible to analyze the impact of free education on student performance.

Table 5: Government Day Secondary School Gwadabawa, WAEC Result

S/No	Number of credits	Before free education Number of students	During free education Number of students
1	9 credits	The school was under suspension	0
2	8 credits		4
3	7 credits		5
4	6 credits		3
5	5 credits		5
6	4 credits		1
7	3 credits		1
8	2 credits		1
9	1 credit		1
10	0 credit		0
	Total		**21**

Source: exams records (WAEC) 2023

Table 5 provides a detailed account of the academic performance at Government Day Secondary School Gwadabawa in the West African Examinations Council (WAEC) during the periods before and during the implementation of free education. The data highlights the number of credits obtained by students in different categories. Before the introduction of free education, the school was under suspension, leading to a lack of recorded data for that period. However, during the free education era, there were positive changes. The total number of students increased to 21, with 4 students achieving 8 credits and 5 students obtaining 7 credits. Furthermore, 5 students secured 5 credits, indicating a distribution of higher grades. Although there was a marked improvement in the number of students obtaining credits, it's noteworthy that there were still instances of students with 0 credits. This underscores the importance of continued efforts to enhance educational outcomes. Generally, Government Day Secondary School Gwadabawa experienced positive shifts in student performance during the period of free education. The increase in the number of students obtaining credits suggests a potential impact on overall academic achievement, but challenges, such as students with 0 credits, indicate the need for ongoing strategies to address varying levels of academic success.

13. Conclusion

In conclusion, the findings of this study indicate that the free education policy in Adamawa State has generally contributed positively to access to education and students' academic performance. The policy has helped reduce financial barriers, encouraged students' participation in education, and improved student retention. Furthermore, adequate infrastructure development is essential for the effective implementation and sustainability of the policy. However, challenges relating to resource allocation and educational quality remain areas requiring further attention.

14. Recommendations

Based on the findings of this research, the following recommendations are made.

i. The government should allocate adequate resources, including textbooks, facilities, and qualified teachers, to support the effective implementation of free education policies.

ii. The government should focus on improving the quality of education in both free and fee-based schools to ensure equity in educational standards.

iii. The government should increase awareness and understanding of free education policies among the public and stakeholders to foster better implementation and support.

iv. The government should implement ongoing evaluations and assessments of free education policies to identify and address existing challenges and areas for improvement.

v. The government should prioritize funding for infrastructure development alongside free education policies to create a conducive learning environment and further enhance academic outcomes.

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