

The Role of School Feeding Programme on School Retention and Academic Achievement among Primary School Pupils in Adamawa State

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Abstract

The study was carried out to determine the role of school feeding programme on school retention and academic achievement among primary school pupils in Adamawa State. The objectives of the study were: to determine the role of school feeding programme on the retention rate of primary school pupils and to determine the role of school feeding programme on the academic achievement of primary school pupils in Adamawa State. The study used Correlational research design. The study population comprised of 1,331 primary schools operating the school feeding programme in Adamawa State. Stratified random sampling technique was used to obtain a sample of 297 primary schools. Proforma titled "School Record Inventory (SRI)" was used to obtain data for the study. The instrument was validated by experts in primary education and agricultural education with one from the Department of Educational Foundations and the other from the Department of Vocational and Technical Education, Adamawa State University, Mubi. The instrument was subjected to field trial test using test re-test method in Taraba State to obtain the reliability. The instrument's reliability was calculated using Cronbach Alpha Coefficient and a reliability of 0.78 was obtained. Mean, standard deviations and paired sample t-test were used for data analysis. Results from the study revealed that school feeding programme increased retention and academic achievement of pupils in the study area. Based on the findings of the study, it was recommended among others that federal government should ensure continuation of the school feeding programme due to gains in retention rate of primary school pupils recorded.

Keywords: School feeding programme, Retention, Academic achievement, Primary school, Pupils

Introduction

For Nigeria to favourably compete with other nations in the world in all sectors, education has to be held in high esteem. Primary Education is commonly seen as education given to children within their late childhood. The rest of the education system is built up on primary education and is the key to the success or failure of the whole system (Nnamdi, 2014). Primary education is the foundation of all the other levels of our educational system and it is very crucial to the success of other levels of education in Nigeria. This is because it is those that graduate from primary school that proceed after gaining admission into secondary education and subsequently to tertiary or higher education. Primary education, apart from the home is the first agent of socialization in any given society, it is the first institution that introduces formal education to children. The goal of primary education in Nigeria can be achieved through making primary education

tuition free, universal and compulsory, implementing the curriculum; provision of educational service through the use of practical, experimental and exploratory methods of teaching, using the language of the environment for the first three years as a medium of instruction, discouraging the incidence of drop out at this level, providing basic infrastructure and training of teachers for the realization of the primary level of education goals (Etor, et al., 2013).

The Nigerian government has made several initiatives to achieve the objectives of primary education and one of such initiatives was the introduction of Universal Primary Education (UPE). UPE was launched in the Western Region on 17th January, 1955. In the year 1957 the scheme was launched in the Eastern Region. The scheme was later re-introduced by then Military Head of State General Olusegun Obasanjo (Rtd) in 1976 and in

1999, the former President Olusegun Obasanjo re-launched the Universal Primary Education and changed it to Universal Basic Education (UBE) (Ayoola, 2014). According to Ayoola (2014), the UBE Programme embraces formal education up to the age of 15 including adult and non-formal education. The UBE as a process specifically entails social mobilization and advocacy for educational participation, empowerment of communities to take greater interest in education and re-orientation of basic education to be in tune with the aspirations of the nation and personal development; training and retraining of teachers with the objective of making them independent, creative and productive individuals; monitoring of learning achievement; as well as development and distribution of materials for basic education. Ayoola (2014) also posited that the UBE intervention fund is divided into five categories which encompasses: matching grants to states, good performance grant, imbalance funds, physically and mentally handicapped grant and school feeding programme.

School Feeding Programme (SFP) according to Appollm and Daniel (2021) refers to provision of food to school going children which aimed at preventing short term hunger among school children, with a view to improve enrolment, retention, attendance and academic performance. School feeding programme is a targeted social safety net that provides both educational and health benefits to the most vulnerable children, thereby increasing enrolment and retention rates, reducing absenteeism and improving food security at household level. It is a social safety programme for children. It provides an important new opportunity to assist poor families and feed hungry children. It provides incentive for poor families to send their children to school and keep them in school (Adekunle & Ogbogu, 2016). Isiko (2022) noted that school meal is meant to keep pupils awake and to maintain high degree of concentration in their classrooms, and pupils who always eat meals at school showed high levels of concentration and the reverse is the case with pupils who do not eat meals at school or at home.

School retention according to Ayoola (2014) is the ability of pupils to go to school and remain in school without dropping out until they graduate. School retention is the flow of primary school children from

one grade to another without any incidence of dropout. He further posited that it is the systematic effort made by schools to encourage primary school children, to remain in school without dropping out before completing their primary education. The SFP is a new initiative brought into the education system. It was launched in Nigeria to address primary school enrolment and retention issues through the provision of nutritious meal to all primary and kindergarten pupils in participating primary schools so as to diminish the starvation as well as encourage children to go to school and the programme has greatly increased primary school retention (Arwa, 2016; Mulonzya, 2017). Reuben (2017) observed that poverty and food insecurity are among the major factors that jeopardize the retention of pupils in primary schools hence increasing dropout rates. In this context, school retention will be altered but SFP can help serve as incentive to encourage re-enrolment of children. Similarly, Zubair *et al.*, (2022) observed that low retention and high rate of pupils' drop out are persistent problems in education of children among poor household. The level of educational attainment has dropped drastically in many developing countries due to low retention and high rate of pupils' drop out. They also affirmed that HGSFP has the potential for achieving and enhancing educational system through increased enrolment and retention rate. In a study carried out by Ahmed (2014) on the impact of the HGSFP showed that provision of school meal had not only enhanced learning of children, but also attributed to high retention rates in primary schools in rural areas. Alhassan (2019) found out in her study that the HGSFP have significant impact on retention of school age children most especially the almajiri in the north central states of Nigeria.

Academic achievement is when an institution or a teacher or a learner achieves short, medium or long term educational goals successfully and the famous correlates of academic achievement apart from scores in an examination or test to include reading speed, reading comprehension, phonetics and the ability to solve mathematical problems assessed through ranges, percentiles, age and grade equivalent (Hertler, 2016). Similarly, Akodu (2019) observed that academic achievement is the scholastic standing of a pupil at a given period of time. It is also used to describe how a pupil is able to demonstrate intellectual abilities. According to

Gbenga-Adeaga et al., (2021), nutrition has a role to play in terms of academic performance of pupils in primary schools. Poor nutrition and health condition among school age children contributes to the inefficiency of the educational system in a country. Nutrition and health status of children are powerful tools to influence a child's performance in school as observed by Abolaji and Raheem (2021). A child lacking food or some nutrients in his/her diet may not have the same potential for learning compared to a well-nourished child, may have difficulties in performing complex tasks and may also have critical health conditions that may delay enrolment and lead to poor academic performance. Studies on nutrition have shown that under-nutrition in children stunt their growth and mental development, hence the relationship between academic achievement and nutrition. Nutrition and health status have influence on a child's learning and how a child performs in school. Irregular school attendance due to malnutrition is one of the key factors for poor academic achievement. Solomon and Yusuf (2022) reported that school feeding programme encouraged pupils to attend school and it enhances their academic performance. Nutrition and health status of children are powerful tools to influence a child's performance in school as observed by Abolaji and Raheem (2021). Ngussa and Mbifile (2016) posited that food is one of the basic need that is needed to be met by every individual for effective functioning of the body. As pupils in school need to concentrate in writing, reading and other academic activities, they need to be provided with sufficient and balanced diet to enable them perform better academically.

Statement of the Problem

Malnutrition and poor health condition are among the factors that contribute to the ineffectiveness of primary education in Adamawa State. School feeding programme was introduced to address challenges of primary schooling such as dropout, facilitate retention and improve pupils' academic achievement. The programme has the potentials to increase access to primary education through increased enrolment, improve academic performance of learners and reduce dropout rate of pupils in primary schools. Despite the expected benefits from the programme, primary education in the state is still faced with challenges of retention and poor academic achievement. Based on the knowledge of the researcher, no study has been

conducted to determine how school feeding programme affects pupils in terms of retention and academic achievement in the state hence the study.

Purpose of the Study

The main purpose of the study is to determine the role of school feeding programme on primary school pupils. Specifically, the study was carried out to:

1. Determine the role of school feeding programme on the retention rate of primary school pupils in Adamawa State.
2. Determine the role of school feeding programme on the academic achievement of primary school pupils in Adamawa State

Research Questions

The following research questions were answered by the study

1. What is the retention rate of primary school pupils before and after school feeding programme was introduced in Adamawa State?
2. What is the academic achievement rate of primary school pupils before and after the school feeding programme was introduced in Adamawa State?

Hypotheses

The following hypotheses were tested at 0.05 level of significance:

HO₁: There is no significant difference in the retention rate of primary school pupils before and after the school feeding programme was introduced in Adamawa State.

HO₂: There is no significant difference in the academic achievement rate of primary school pupils before and after the school feeding programme was introduced in Adamawa State.

Methodology

The study used Correlational research design and was conducted in Adamawa State in the north east region of Nigeria. The study population comprised of 1,331 primary schools operating the school feeding programme in Adamawa State. Stratified random sampling technique was used to obtain a sample of 297 primary schools. Proforma titled "School Record Inventory (SRI)" was used to obtain data for the study. The instrument collected school records on retention and academic achievement of

pupils. The instrument was validated by experts in primary education and agricultural education with one from the Department of Educational Foundations and the other from the Department of Vocational and Technical Education, Adamawa State University, Mubi. The instrument was subjected to field trial test using test-re-test method in Taraba State. The instrument's reliability was calculated using Cronbach Alpha Coefficient and a reliability of 0.78 was obtained. The data for the study was obtained by the researchers from primary

schools in the study area. Mean and standard deviation were used to answer the research questions while the null hypotheses were tested at 0.05 significance level using paired sample t-test.

Results

Research Question 1: What is the retention rate of primary school pupils before and after school feeding programme was introduced in Adamawa State?

Table 1: Mean and Standard Deviation of Retention Rate of Primary School Pupils before and after School Feeding Programme was Introduced in Adamawa State

	N	Mean	Std. Deviation
Retention before HGSFP	297	18253.20	3015.45458
Retention after HGSFP	297	29687.33	5452.07040

Table 1 provides results on the retention rate of primary school pupils in Adamawa State before and after the introduction of the school feeding programme. This analysis is based on a sample of primary one to three pupils in 297 primary school, allowing for a robust assessment of the programme's impact. Before the school feeding programme, the mean retention rate was approximately 18,253.20 primary school pupils, with a standard deviation of around 3,015.45458. The standard deviation measures the variation in retention rates among the primary school pupils. After the programme's implementation, there was a significant increase in the mean retention rate, which rose to approximately 29,687.33 primary school pupils. This suggests a substantial improvement in the ability of primary

school pupils to continue their education. The elevated standard deviation after the programme commencement indicates that while there was an overall increase in retention rates, there may be some variability in the degree of improvement among different schools. In summary, the result reveals a marked enhancement in the retention rate of primary school pupils in Adamawa State following the implementation of the school feeding programme. This suggests that the programme may have positively influenced the ability of pupils to remain in school, which is a crucial factor in ensuring their educational development and future prospects. The figure I below shows the bar chart of the retention of primary school pupils before and after the school feeding programme commenced.

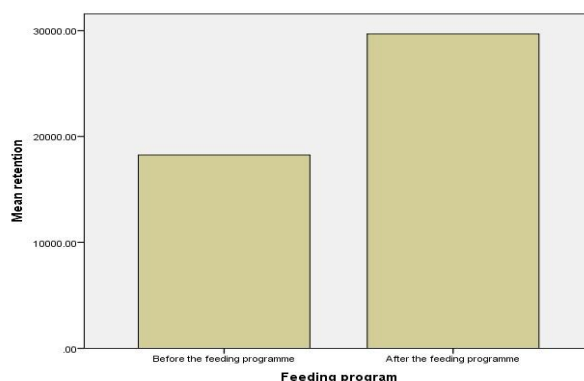


Figure 1: Bar Chart of Retention of Primary School Pupils before and after School Feeding Programme was introduced in Adamawa State.

Research Question 2: What is the academic achievement rate of primary school pupils before and after the school feeding programme was introduced in Adamawa State?

Table 2: Mean and Standard Deviation of Academic Achievement of Primary School Pupils before and after School Feeding Programme was Introduced in Adamawa State

	N	Mean	Std. Deviation
Performance before HGSFP	297	39.87	1.49029
Performance after HGSFP	297	43.43	2.01092

The results in table 2 provides mean and standard deviation of the academic achievement of primary school pupils in Adamawa State both before and after the school feeding programme was introduced. This analysis is based on a sample of 297 primary schools, which allows for a robust assessment of the programme's impact on academic performance of pupils. Before the school feeding programme was introduced, the mean academic performance was approximately 39.87, with a relatively low standard deviation of 1.49029. The standard deviation measures the variability in academic achievement among the primary one to three pupils in the 297 sampled schools. After the programme's introduction, there was a noticeable increase in the mean academic performance, which rose to approximately 43.43. This suggests an improvement in the academic achievement of primary school

pupils in Adamawa State after the programme's implementation. The increased standard deviation after the programme commenced indicates that while there was an overall improvement in academic performance, there may be some variability in the extent of this improvement among different schools. In summary, the result indicates a positive impact on the academic achievement of primary school pupils in Adamawa State following the implementation of the school feeding programme. The increase in mean academic performance suggests that the programme may have contributed to improved educational outcomes for these pupils, potentially enhancing their future prospects and overall educational experience. The figure II below shows the bar chart of the academic performance of primary school pupils before and after school feeding programme was introduced.

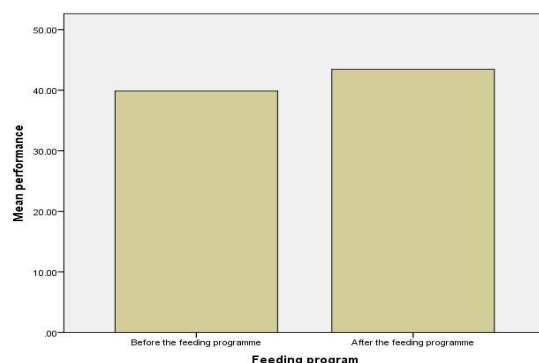


Figure 2: Bar Chart of Academic Performance of Primary School Pupils before and after the School Feeding Programme was Introduced in Adamawa State.

HO₁: There is no significant difference in the retention rate of primary school pupils before and after the school feeding programme was introduced in Adamawa State.

Table 3: Summary of Paired Sample t – test of Difference in the Retention Rate of Primary School Pupils before and after School Feeding Programme was Introduced in Adamawa State

	N	Mean	Std. Deviation	df	T	p-value	Decision
Retention before	297	18253.20	3015.45	296	-9.398	0.000	HO₃ rejected
Retention after	297	29687.33	5452.07				

The table 3 above summarizes the results of a paired sample t-test conducted to assess whether there is a significant difference in the retention rate of primary school pupils before and after the commencement of the school feeding programme in Adamawa State. In the analysis, data from 297 primary schools comprising of pupils in primary one to three in Adamawa State were used. Before the introduction of SFP, the mean retention rate was approximately 18,253.20 primary school pupils, with a standard deviation of approximately 3,015.45. After the programme's implementation, the mean retention rate increased to approximately 29,687.33 primary school pupils, with a standard deviation of approximately 5,452.07. The paired sample t-test yielded a t-value of -9.398 and a p-value of 0.000. Comparing the p-value to a commonly used significance level 0.05 reveals that the p-value is

considerably smaller. In fact, the p-value is less than 0.05, indicating a highly statistically significant difference between the retention rates before and after the commencement of SFP. As a result, based on the results of the paired sample t-test, the null hypothesis (HO₁) is rejected. This implies that there is indeed a significant difference in the retention rates of primary school pupils before and after the school feeding programme was introduced in Adamawa State. The programme appears to have had a substantial and positive impact on retaining primary school pupils, contributing to their continued education in the state.

HO₂: There is no significant difference in the academic achievement rate of primary school pupils before and after school feeding programme was introduced in Adamawa State.

Table 4: Summary of Paired Sample t – test of Difference in the Academic Achievement of Primary School Pupils before and after School Feeding Programme was introduced in Adamawa State

	N	Mean	Std. Deviation	df	T	p-value	Decision
Performance before	297	39.87	1.49	296	-7.817	0.000	HO₄ rejected
Performance after	297	43.43	2.01				

The table 4 above presents a summary of the results of a paired sample t-test conducted to evaluate whether there is a significant difference in the academic achievement of primary school pupils before and after the school feeding programme was introduced in Adamawa State. The null hypothesis (H_0) under revealed that there is no significant difference in academic achievement of primary school pupils before and after the school feeding programme was introduced in Adamawa State. In the analysis, data from 297 primary schools in Adamawa State were included. Before the introduction of SFP, the mean academic performance was approximately 39.87, with a relatively low standard deviation of 1.49. After the programme's implementation, the mean academic performance increased to approximately 43.43, with a standard deviation of approximately 2.01. The paired sample t-test resulted in a t-value of -7.817 and a p-value of 0.000. Comparing the p-value to a typical significance level 0.05, it is evident that the p-value is significantly smaller. In fact, the p-value is less than 0.05, indicating a highly statistically significant difference in academic achievement before and after the SFP commenced. Therefore, based on the results of the paired sample t-test, the null hypothesis (H_0) is rejected. This suggests that there is indeed a significant difference in the academic achievement of primary school pupils before and after the introduction of School Feeding Programme in Adamawa State. The program appears to have had a substantial and positive impact on enhancing the academic performance of these pupils, potentially contributing to their educational success and future prospects in the state.

Discussion

It was found out that in the study that school feeding programme has increased the retention rate of primary school pupils as more children remain in school without dropping out due to meals served in the school. Hypothesis one revealed that there is significant difference in the retention rate of primary school pupils before and after school feeding programme was introduced. To corroborate with the finding of the study, Arwa (2016) found out in his study that with the introduction of the school feeding programme, there was improvement in the retention rate and a drop in the dropout rate. The finding agreed with that of Reuben (2017) who reported that

school feeding programme has reduced the dropout rate of pupils thereby increasing retention. Ahmed (2014) also agreed with the finding as he reported in his study that the provision of food through the home grown school feeding programme had not only enhance learning of children but also attribute to high retention rate in primary schools most especially in rural areas.

Furthermore, the finding from the study revealed that pupils' academic achievement in primary schools increased due to the implementation of the school feeding programme. Hypothesis two also showed that there is significant difference in the academic achievement of primary school pupils before and after the school feeding programme was introduced. This shows that nutrition has influence on a child's learning and how a child performs in school. A child lacking food may have difficulties in performing complex task and may also have critical health condition that may lead to poor academic achievement. The study found out that the food given to pupils has gone a long way in improving their academic achievement in primary schools. Solomon and Yusuf (2022) agreed with this finding as they reported that school feeding programme encouraged pupils to attend school and it enhances their academic performance. This finding agreed with that of Abolaji and Raheem (2021) who found out in their study that well-nourished children perform better than under-nourished children academically. Similarly, Gbenga-Adeaga *et al.* (2021) found out in their study that the home grown school feeding programme have improved the academic performance of pupils among the beneficiaries.

The finding however contradicts that of Isiko (2022) who reported that despite the school meals served to pupils to reduce hunger and improve academic performance, the school feeding programme has not improve the academic performance of pupils though school attendance increased. Furthermore, in contrast to the finding of the study, Mulonzya (2017) also found out in his study that the school feeding programme fails to improve academic performance in primary schools as 10.08% drop in academic performance was recorded in his study. He found out that the programme failed to improve academic achievement due to increase in enrolment and

attendance and no any effort was made to improve school facilities such as classrooms, chairs and tables for pupils and other instructional items, and also, efforts were not made to recruit new teachers to commensurate with the increase in the population of pupils.

Conclusion

Food is very important to young children as it has positively influenced the ability of pupils to remain in school which is a crucial factor in ensuring their educational development and future prospects. It also plays a significant role in the educational achievement of pupils as when pupils remain in school, their potentials for improvement is enhanced.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. The federal government should ensure continuation of the school feeding programme due to gains in retention rate of primary school pupils recorded.
2. The school feeding programme should be sustained by federal government to ensure that the improvement in academic performance of pupils is maintained.

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