

Effect of Home Grown School Feeding Programme on Pupils Enrollment in Hong Local Government Area of Adamawa State

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ARTICLE INFO

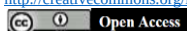
Keywords:
effect,
home grown,
school feeding,
programme,
pupils,
enrollment and attendance.

Vol. 01, No. 05, 2026

<https://doi.org/10.5281/zenodo.23593412>

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ABSTRACT

The study examined the effect of home grown school feeding programme on pupils enrollment in Hong Local Government Area of Adamawa State. The specific objectives were to examine the effect of Home Grown School Feeding Programme (HGSFP) on Pupils enrolment, the effect of Home Grown School Feeding Programme (HGSFP) on Pupils attendance and examine the challenges facing the implementation of Home Grown School Feeding Programme (HGSFP). A sample size of 358 respondents was used for the study drawn using multi-stage sampling technique and the data collected were coded and analyzed using the Statistical Package for Social Sciences (SPSS). The results show across all items, mean scores range from 3.91 to 4.74, exceeding the benchmark of 3.0, which signifies agreement. This indicates a broad consensus among respondents that the programme has significantly improved access to and engagement in schooling. It also reveal a strong consensus that the Home-Grown School Feeding Programme (HGSFP) has significantly improved school attendance among primary school pupils. All the items recorded mean scores ranging from 3.99 to 4.56, which are well above the acceptance benchmark, indicating general agreement among respondents on the positive influence of the programme. The results indicates that one major issue identified is poor awareness and sensitization. The findings show that lack of timely awareness (Mean = 4.20) and general community unawareness of programme benefits (Mean = 4.56) are key constraints. This suggests that despite the availability of the programme, insufficient communication reduces its reach and effectiveness. Recent studies support this observation. The results of the paired t-test revealed that the mean enrolment after the introduction of the school feeding programme (M = 3239.15) was higher than the mean enrolment before the programme (M = 2494.62). The mean difference of 744.54 indicates a substantial increase in enrolment. The study recommends that the Programme has clear benefits, the though its effectiveness is limited by challenges related to awareness, funding, monitoring, logistics, infrastructure, and human resources. Addressing these constraints is essential for optimizing the programme's impact on educational access and quality through governmental and Non government Organizations, the programme should be extend to other level of education such as some of the pupils that are not benefiting and post primary schools and with the advent of feeding programme there need for the succession government to inbuilt more on the program so as to encourage pupils' enrolment.

Introduction

Food insecurity and malnutrition affect the educational attainment, family life, and overall health of children and adolescents attending school (Jean et al 2023). There is considerable evidence indicating that malnutrition and food insecurity remain a major global public health concern in developing countries, particularly in the sub-Sahara African region (Grebmer et al., 2021). School Feeding Programme (SFP) according to World Bank is a targeted social safety nets that provide both educational

and health benefits to the most vulnerable children, thereby increasing enrolment and attendance rates, reducing absenteeism, increasing cognitive development and improving food security at the household level (World Food Programme, WFP, 2023).

According to WFP (2023), home grown school feeding programs can significantly contribute to the achievement of the sustainable Development Goals (SDGs), particularly SDG 2 (on ending hunger, achieving food security and improved nutrition, and promoting sustainable agriculture) and SDG 4 (on quality education). In acknowledgement of this, numerous governments and regional organizations, including the African Union and the Community of Latin America and Caribbean States, are including these initiatives in their strategies for achieving food security and implementing the 2030 Development Agenda (Evans & Mendez Acosta, 2021). The overall goal of the School Feeding Programme in Nigeria is to reduce hunger and malnutrition among school children and enhance the achievement of Universal Basic Education. Generally, the objectives for the school meals are mainly three; School feeding as a social safety net; as a requirement to advance learning and educational outcomes; and to boost nutrition and or health status of the school children (Aliyar *et al.*, 2015).

School feeding programme attract children to school by providing nutritious meals in exchange for school participation. If children are malnourished, SFP may also boost learning and cognitive development by improving attention spans and nutrition. The attraction of these programme is their potential to improve both school participation, learning, and cognitive outcomes (Drake *et al.*, 2020)). In its multi-faceted role, SFPs can be linked to several of the MDGs namely; eradication of extreme poverty, hunger, achieving universal basic education, promoting gender equality and women empowerment, developing a global partnership for development, hence, the use of SFPs in the developing countries is a significant intervention to be considered. The broad objective of the study is to examine the effect of home grown school feeding programme on pupils enrollment, attendance and retention in Hong Local Government Area of Adamawa State. The specific objectives were to:-

- i. Examine the effect of Home Grown School Feeding Programme (HGSFP) on Pupils enrolment,
- ii. Examine the effect of Home Grown School Feeding Programme (HGSFP) on Pupils attendance,
- iii. Examine the challenges facing the implementation of Home Grown School Feeding Programme (HGSFP).

Methodology

2.1 Research Design

The study adopted a **descriptive survey research design**. The survey design was considered appropriate because it enables the researcher to obtain information from a representative sample of respondents regarding their opinions and experiences concerning the implementation of the Home-Grown School Feeding Programme and its effects on pupils' enrolment, attendance, and retention. The design also allows for the collection of quantitative data that can be analyzed statistically to draw valid conclusions.

2.2 Area of the Study

The study was conducted in **Hong Local Government Area of Adamawa State, Nigeria**. Hong Local Government Area is located in the northern part of Adamawa State and comprises several communities with both urban and rural settlements. The area is predominantly agrarian, with farming serving as the major occupation of the inhabitants. The Local Government Area has a considerable number of public primary schools that benefit from the Home-Grown School Feeding Programme, making it suitable for the study.

2.3 Population of the Study

The population of the study consisted of all stakeholders involved in the implementation and utilization of the Home-Grown School Feeding Programme in public primary schools in Hong Local Government Area. These included head teachers, teachers, school feeding vendors, School-Based Management Committee (SBMC) members, and parents of pupils in selected schools. The target population was estimated at **3,420 respondents** drawn from selected public primary schools participating in the programme.

2.4 Sample Size and Sampling Technique

A sample size of **358 respondents** was used for the study. The sample size was considered adequate to provide reliable information and ensure representation of the target population. A **multi-stage sampling technique** was employed for the selection of respondents. First, public primary schools benefiting from the Home-Grown School Feeding Programme were purposively selected. Secondly, simple random sampling was used to select schools from the list of participating schools. Finally, proportionate sampling technique was used to select respondents from the various categories.

2.5 Instrument for Data Collection

The primary instrument for data collection was a **questionnaire** designed by the researcher. The questionnaire was titled: **"Home-Grown School Feeding Programme and Pupils' Enrolment, Attendance and Retention Questionnaire (HGSFPEARQ).**

2.6 Method of Data Collection

The researchers obtained an introductory letter from the Department and sought permission from relevant educational authorities and school administrators before administering the questionnaire. The questionnaires were distributed personally by the researcher with the assistance of trained research assistants. Respondents were given adequate time to complete the questionnaires, after which they were collected immediately to ensure a high retrieval rate.

2.7 Method of Data Analysis

The data collected were coded and analyzed using the **Statistical Package for Social Sciences (SPSS)**. The research questions were answered using: Frequency counts, Percentages, Mean scores and Standard deviation. Decision Rule: Mean score of **2.50 and above** = Accepted/Agreed, Mean score of **below 2.50** = Rejected/Disagreed. The hypothesis, a paired-sample t-test was employed to determine whether a significant difference exists in students' enrolment before and after the introduction of the Home-Grown School Feeding Programme (HGSFP).

Results and Discussion

3.1 Effect of Home Grown School Feeding Programme on Pupils Enrolment

The results in Table 1 indicate a strong positive perception of the Home-Grown School Feeding Programme (HGSFP) on pupils' enrolment and overall participation in primary education. Across all items, mean scores range from 3.91 to 4.74, exceeding the benchmark of 3.0, which signifies agreement. This indicates a broad consensus among respondents that the programme has significantly improved access to and engagement in schooling. First, the finding that the programme has increased enrolment (Mean = 4.43) highlights its effectiveness as an incentive for school attendance. The provision of free meals reduces the financial burden on households, particularly in low-income settings, thereby encouraging parents to enrol their children in school. This aligns with recent studies such as Aurino et al. (2022), who found that school feeding programmes in sub-Saharan Africa significantly improve school participation, especially among vulnerable populations. Similarly, a report by the World Food Programme (WFP, 2023) confirms that school meals act as a strong social safety net that boosts enrolment rates.

The result showing that school feeding encourages punctuality (Mean = 3.91) and attracts pupils to school (Mean = 3.94) further reinforces the programme's role in improving daily attendance. Regular

access to meals motivates pupils to arrive early and attend consistently. This is consistent with findings by Gelli et al. (2019), who observed that school feeding initiatives not only increase enrolment but also improve attendance and punctuality due to the immediate nutritional benefits provided to pupils. Moreover, the high mean scores for increased desire to attend school (Mean = 4.44) and making school more attractive (Mean = 4.37) suggest that the programme enhances pupils' intrinsic motivation. When schools provide meals, they become more appealing environments, especially for children from food-insecure households. This supports the findings of Drake et al. (2020), who emphasized that school feeding programmes improve both access and the learning environment, making schools more child-friendly. The reduction in dropout rates (Mean = 4.29) is another critical outcome. By addressing short-term hunger and supporting household food security, the programme reduces the likelihood of children leaving school prematurely. Recent evidence from Evans and Mendez Acosta (2021) also shows that school feeding programmes contribute to improved retention, particularly among girls and marginalized groups. Additionally, the strong agreement that school feeding supports the achievement of free and compulsory basic education (Mean = 4.74) underscores its policy relevance. The programme serves as a strategic tool for governments to meet Sustainable Development Goal 4 (quality education). This is corroborated by UNESCO (2022), which highlights school feeding as an effective intervention for achieving universal basic education in developing countries. Finally, the perception that school feeding improves learning (Mean = 4.53) reflects the link between nutrition and cognitive performance. Well-nourished pupils are more attentive, active, and capable of learning. This aligns with Bundy et al. (2018), who demonstrated that school feeding programmes contribute to better educational outcomes through improved nutrition and concentration.

Table 1: Effect of Home Grown School Feeding Programme on Pupils Enrolment (n =358)

Items	SA	A	UD	SA	A	Mean	Remark
School Feeding Programme has increased enrollment of pupils into primary school	245	76	26	2	19	4.43	Agreed
School feeding encourages punctuality of pupils to school	187	83	32	10	56	3.91	Agreed
Provision of daily food has helped in attracting pupils to school	196	91	9	7	65	3.94	Agreed
School Feeding Programme has increased the desire of the pupils to attend school	243			10	13		
		79	23			4.44	Agreed
Schooling in primary education is very important for both boys and girls	176			40	37		
		101	14			3.92	Agreed
School Feeding has made school more attractive to pupils	213			23	10		
		121	1			4.37	Agreed
With feeding in schools pupils drop-out rate have reduced	128			5	2		
		227	6			4.29	Agreed
School feeding is a sure path towards achieving goals of free and compulsory basic education	312			3	2		
		23	28			4.74	Agreed
School feeding makes pupil learn better	234	97	34	3	0	4.53	Agreed

Key: SA= Strongly Agreed, A = Agreed, UD= Undecided, D = Disagreed, SD= Strongly Disagreed

Source: Field survey, 2026

3.2 Effects of Home-Grown School Feeding Programme (HGSFP) on school attendance among primary school pupils

The results presented in Table 2 reveal a strong consensus that the Home-Grown School Feeding Programme (HGSFP) has significantly improved school attendance among primary school pupils. All the items recorded mean scores ranging from 3.99 to 4.56, which are well above the acceptance benchmark, indicating general agreement among respondents on the positive influence of the programme. The finding revealed that the total number of pupils attending school has increased (Mean = 4.20) suggests that the programme serves as a major incentive for daily school participation. By providing meals, the programme reduces short-term hunger and encourages children, especially from economically disadvantaged households, to attend school regularly. This supports the findings of Aurino et al. (2022), who reported that school feeding programmes across low- and middle-income countries significantly increase school attendance by addressing both nutritional and economic barriers.

Similarly, the result indicating that more pupils are willing to attend school (Mean = 3.99) reflects improved motivation and interest in schooling. The availability of food acts as both a pull factor and a form of social protection for families. This aligns with the World Food Programme (WFP, 2023), which highlights that school feeding programmes increase children's willingness to attend school by improving household food security and reducing the opportunity cost of schooling. The high mean score for pupils remaining in school until closing hours (Mean = 4.26) indicates that the programme not only attracts pupils to school but also sustains their presence throughout the school day. This is particularly important in contexts where hunger may otherwise force children to leave school early. Drake et al. (2020) similarly found that school feeding contributes to improved time-on-task, as pupils are more likely to stay in school and participate actively in learning activities.

Furthermore, the finding that pupils' class attendance is regular (Mean = 4.56), which is the highest among the items, underscores the programme's strong effect on consistency in school participation. Regular attendance is essential for effective learning and academic progress. This is consistent with Gelli et al. (2019), who observed that school feeding programmes lead to sustained improvements in attendance patterns and reduce irregular school participation. The result showing that absenteeism has reduced (Mean = 4.18) further confirms the effectiveness of the programme in ensuring consistent school attendance. By alleviating hunger and providing an incentive to attend school daily, the programme minimizes the likelihood of pupils missing classes. Evans and Mendez Acosta (2021) also reported that school feeding interventions are associated with lower absenteeism rates, particularly among vulnerable children.

Table 2: Effect of Home Grown School Feeding Program on School Attendance

Items	SA	A	UD	SA	A	Mean	Remark
As a result of Home Grown School Feeding Programme total number of pupils attending school has increased	211	89	23	21	24	4.20	Agreed
With introduction of Home Grown School Feeding Programme more number of pupils are willing to attend school	187	97	14	35	35	3.99	Agreed
Pupils can now attend classes and remain in school till closing hours as a result of Home Grown School Feeding Programme	203	106	23	23	13	4.26	Agreed
With introduction of Home Grown School Feeding Programme pupils class attendance is regular	227	128	6	5	2	4.56	Agreed
As a result of Home Grown School Feeding Programme attendance of pupils to daily classes has reduced their absenteeism	276	9	18	3	62	4.18	Agreed

Key: SA= Strongly Agreed, A = Agreed, UD= Undecided, D = Disagreed, SD= Strongly Disagreed

Source: Field survey, 2026

3.3 Challenges that limit the contribution of the Home Grown School Feeding Programme

The results in Table 3 show that respondents generally agree that several structural, administrative, and resource-related challenges limit the effectiveness of the Home-Grown School Feeding Programme (HGSFP). All the items recorded mean scores between 3.91 and 4.56, indicating strong agreement that these factors significantly constrain the programme's ability to achieve its full impact, particularly in attracting and retaining pupils in primary schools. One major issue identified is poor awareness and sensitization. The findings show that lack of timely awareness (Mean = 4.20) and general community unawareness of programme benefits (Mean = 4.56) are key constraints. This suggests that despite the availability of the programme, insufficient communication reduces its reach and effectiveness. Recent studies support this observation. For instance, Aurino et al. (2022) emphasize that community engagement and awareness are critical for maximizing the impact of school feeding programmes, as informed households are more likely to enrol and retain children in school. Funding constraints (Mean = 3.99) also emerged as a significant challenge. Inadequate and inconsistent funding can affect food quality, quantity, and regularity of supply, thereby weakening the programme's attractiveness. This aligns with findings by the World Food Programme (WFP, 2023), which notes that financial sustainability remains one of the biggest threats to school feeding programmes globally, particularly in low-income countries where governments rely on limited budgets or donor support.

Another important challenge is the high expectations of parents (Mean = 4.26). When expectations regarding meal quality, frequency, or nutritional value are not met, dissatisfaction may arise, potentially discouraging participation. Drake et al. (2020) similarly observed that unmet stakeholder expectations can undermine trust and reduce programme effectiveness if not properly managed. The study further highlights serious gaps in monitoring and quality control. Issues such as inability to effectively monitor food preparation (Mean = 4.43), poor supervision of the preparation environment (Mean = 3.91), and challenges in ensuring food quality (Mean = 3.94) indicate weaknesses in programme implementation. Additionally, inadequate monitoring of food serving and lack of support for monitoring and evaluation (Means $\approx$ 3.99–4.26) suggest systemic oversight deficiencies. These findings are consistent with Gelli et al. (2019), who noted that weak monitoring systems can compromise food safety, programme credibility, and overall outcomes. Logistical challenges also feature prominently. Inadequate implementation logistics (Mean = 4.43) and insufficient support for monitoring facilities (Mean = 4.26) point to operational inefficiencies. According to Bundy et al. (2018), effective school feeding programmes require strong supply chains, storage, and distribution systems; without these, implementation becomes inconsistent and less impactful.

Furthermore, the results reveal that increased enrolment due to the programme has placed pressure on school infrastructure. Challenges such as insufficient classrooms (Mean = 3.99), inadequate furniture (Mean = 4.26), and lack of instructional facilities (Mean = 4.56) indicate that schools are struggling to accommodate the growing number of pupils. This is supported by UNESCO (2022), which highlights that while school feeding programmes boost enrolment, they must be complemented with investments in educational infrastructure to maintain quality learning conditions. Lastly, the issue of increased teacher workload (Mean = 4.43) reflects the human resource implications of higher enrolment. More pupils mean greater demands on teachers, which can affect teaching effectiveness if not addressed. Evans and Mendez Acosta (2021) also found that rapid increases in enrolment without corresponding increases in teaching staff can strain education systems and reduce learning outcomes.

Table 3: Challenges that limit the contribution of the Home Grown School Feeding Programme

ITEM	SA	A	UD	D	SD	Mean	Remark
Lack of timely awareness has limited the contribution of the Home Grown School Feeding Programme to attracting pupils into primary school.	211			21	24		
		89	23			4.20	Agreed
Funding has become one of the challenges that limit the contribution of the Home Grown School Feeding Programme to attracting pupils into primary school	187			35	35		
		97	14			3.99	Agreed
High expectation of parents on school feeding is a challenge to the Home Grown School Feeding Programme	203			23	13		
		106	23			4.26	Agreed
Unawareness of the community on the benefits of Home Grown School Feeding Programme is a challenge to attracting pupils into primary schools	227			5	2		
		128	6			4.56	Agreed
Inability to effectively monitor food preparation by officials	245	76	26	2	19	4.43	Agreed
Inability to effectively monitor the environment in which food is prepared	187	83	32	10	56		
						3.91	Agreed
Inability to effectively ascertain the quality of food served to the pupils	196	91	9	7	65		
						3.94	Agreed
Inadequate implementation logistic support	245	76	26	2	19	4.43	Agreed
Inadequate monitoring food preparation	187	83	32	10	56	3.91	Agreed
Improper monitoring the serving of food to children	187	97	14	35	35	3.99	Agreed
Inadequate logistic support for monitoring and evaluation of facilities for food preparing and serving	203			23	13		
		106	23			4.26	Agreed
Lack of support for monitoring and evaluating the Programme	187	97	14	35	35	3.99	Agreed
Insufficient classrooms to cope with increased enrolment	187	97	14	35	35	3.99	Agreed
Insufficient furniture to cope with increased enrollment	203	106	23	23	13	4.26	Agreed
Insufficient instructional facilities to cope with increased enrollment	227			5	2		
		128	6			4.56	Agreed
Excessive work load for teachers as a result of increased enrollment	245	76	26	2	19		
						4.43	Agreed

Key: SA= Strongly Agreed, A = Agreed, UD= Undecided, D = Disagreed, SD= Strongly Disagreed

Source: Field survey, 2026

3.4 Test of Hypothesis Using Paired Sample t-test

Hypothesis:

H₀: There is no significant difference in students' enrolment before and after the introduction of the Home-Grown School Feeding Programme.

A paired-samples t-test was employed to determine whether a significant difference exists in students' enrolment before and after the introduction of the Home-Grown School Feeding Programme (HGSFP). The paired t-test is appropriate because it compares two related samples (i.e., enrolment figures from the same schools before and after the intervention). The results of the paired t-test revealed that the mean enrolment after the introduction of the school feeding programme (M = 3239.15) was higher than the mean enrolment before the programme (M = 2494.62). The mean difference of 744.54 indicates a substantial increase in enrolment. The calculated t-value of 2.47 with 12 degrees of freedom yielded a p-value less than 0.05. Based on this result, the null hypothesis is rejected. This implies that

there is a statistically significant difference in students' enrolment before and after the introduction of the Home-Grown School Feeding Programme.

The findings indicate that the Home-Grown School Feeding Programme has a significant positive effect on students' enrolment. The observed increase in enrolment after the introduction of the programme suggests that the provision of school meals serves as a strong incentive for school participation. This finding is consistent with the study by Aurino, Fernandes, and Penny (2022), who reported that school feeding programmes significantly improve school enrolment, particularly in developing countries where poverty and food insecurity affect access to education. The provision of meals reduces the financial burden on households and encourages parents to enrol their children in school. Similarly, the World Food Programme (2023) reported that school feeding programmes contribute significantly to increased enrolment and retention by making schools more attractive to children from disadvantaged backgrounds. The results of this study align with this global evidence. Furthermore, Drake et al. (2020) found that comparative analyses of pre- and post-intervention data consistently show statistically significant improvements in school enrolment following the introduction of feeding programmes. These improvements are attributed to both nutritional benefits and the economic relief provided to families. However, despite the positive impact, the relatively large variation in the data suggests that the effectiveness of the programme may differ across schools. This variation could be due to factors such as funding constraints, monitoring challenges, and inadequate infrastructure, which may limit the full realization of the programme's benefits

Table 4: A paired-samples t-test on students' enrolment before and after the introduction of the Home-Grown School Feeding Programme (HGSFP)

Variable	Mean	N	Df	Paired Difference	Mean Difference	Std. Dev.	t-value	p-value
Before	2494.62	13	12	744.54	1086.80	301.40	2.47	0.05
After	3239.15	13						

Source: Computer Analysis

Conclusion

Conclusively, Home-Grown School Feeding Programme has a significant positive effect on pupils' enrolment, attendance, retention, and learning. It has a substantial positive effect on school attendance as it increases the number of pupils attending school, enhances their willingness to attend, ensures they remain in school throughout the day, promotes regular attendance, and reduces absenteeism. The paired t-test analysis can be concluded that the Home-Grown School Feeding Programme has a statistically significant positive impact on students' enrolment.. Therefore, the programme is an effective strategy for increasing access to primary education and should be sustained and strengthened.

Recommendations

- The Programme has clear benefits, the though its effectiveness is limited by challenges related to awareness, funding, monitoring, logistics, infrastructure, and human resources. Addressing these constraints is essential for optimizing the programme's impact on educational access and quality through governmental and Non government Organizations.
- The programme should be extend to other level of education such as some of the pupils that are not benefiting and post primary schools.

With the advent of feeding programme there need for the succession government to inbuilt more on the program so as to encourage pupils' enrolment.

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