

Beyond Enrolment: School Feeding Programme Evaluation in Public Primary Schools in Ondo State, Nigeria

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Article Info	Abstract
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Keywords: School feeding programme; Nutrition; Social protection; Local agriculture; Employment; Poverty reduction	<i>School feeding programmes are increasingly understood as multidimensional interventions that combine nutrition, education, social protection and local economic development. This study evaluated the National Home-Grown School Feeding Programme (NHGSFP) as implemented in public primary schools in Ondo State, Nigeria, across six outcome dimensions: nutrition and health; enrolment and attendance; educational outcomes; local agriculture support; employment and empowerment; and social development and poverty reduction. The study was guided by Stufflebeam's Context, Input, Process and Product (CIPP) Evaluation Model and Maslow's Hierarchy of Needs Theory. A concurrent mixed-methods evaluation design was adopted, combining a descriptive survey, ex-post facto analysis of administrative records and qualitative interviews. Quantitative evidence was obtained from 1,191 valid respondents drawn from teachers, parents/guardians, head teachers, education officials, school health officers, cooks/vendors, farmers/suppliers and community leaders. The questionnaire recorded an overall Cronbach's alpha coefficient of .95. Stakeholders rated nutrition and health very high ($M = 3.52$, $SD = 0.54$), enrolment and attendance very high ($M = 3.51$, $SD = 0.53$), educational outcomes high ($M = 3.44$, $SD = 0.52$), local agriculture support high ($M = 3.44$, $SD = 0.55$), employment and empowerment high ($M = 3.48$, $SD = 0.51$), and social development and poverty reduction high ($M = 3.45$, $SD = 0.52$). Particularly strong indicators included nutritional balance of meals ($M = 3.72$), employment creation ($M = 3.72$), women's empowerment through cook/vendor participation ($M = 3.56$), reliable markets for local farmers ($M = 3.66$), and reduction of household feeding costs ($M = 3.56$). Qualitative evidence corroborated benefits in educational access, nutritional wellbeing, social cohesion and community economic activity. Official enrolment records available for 2019–2022 showed cumulative enrolment of 872,361 pupils, comprising 462,352 urban and 410,009 rural enrolments. Enrolment declined from 236,445 in 2019 to 183,372 in 2020, before recovering to 225,567 in 2021 and 226,977 in 2022. However, participants identified funding instability, delayed payments, variation in meal quality, monitoring weaknesses and incomplete inclusion of smallholder farmers as continuing vulnerabilities. The study concludes that the programme generated perceived benefits across multiple dimensions and functioned as a broad social investment rather than merely a feeding intervention, although its sustainability and equity depend on reliable implementation.</i>

Introduction

School feeding occupies an important position at the intersection of education, nutrition and social protection. Although the immediate output of a feeding programme is the provision of food to pupils during the school day, its intended effects can extend to educational participation, learning, household welfare, agricultural production and employment (Alderman & Bundy, 2012; Bundy *et al.*, 2009). This multidimensional character is particularly evident in home-grown school feeding programmes, where food procurement is linked to local agricultural production and meal preparation creates opportunities for community-based cooks and vendors.

The relationship between nutrition and educational participation is important because hunger and inadequate nutrition can constrain children's ability to participate effectively in school. Grantham-McGregor *et al.* (2007) established that inadequate nutrition and poverty can adversely affect children's cognitive, motor and socio-emotional development. School feeding therefore represents an intervention through which immediate nutritional needs may be addressed while simultaneously reducing some household barriers to school participation.

In Nigeria, the National Home-Grown School Feeding Programme was relaunched nationally in 2016 as part of the National Social Investment Programme. Its objectives include improving pupils' health and nutrition, increasing enrolment, attendance and retention, supporting learning, stimulating local agricultural production and creating employment opportunities. The programme consequently cannot be adequately understood by examining enrolment alone. A programme may increase school participation while also producing nutritional, agricultural, employment and household-welfare effects.

Adekunle and Ogbogu (2016) reported positive relationships between school feeding, enrolment and academic performance in Osun State, while Agu *et al.* (2023) found perceived improvements in enrolment and attendance alongside implementation challenges in Southeast Nigeria. Barnabas, Bavorova and Madaki (2024) similarly reported positive effects on enrolment and attendance in northeastern Nigeria. These studies nevertheless tend to focus on particular outcomes or locations.

The study is particularly relevant to Ondo State because existing Nigerian evidence has often been geographically narrow and cross-sectional. Past study may have identified gaps in comprehensive state-level evaluation that combines stakeholder evidence, administrative enrolment records and multiple programme outcomes. This present study addresses a gap by reframing the past findings around the question: what does the programme achieve beyond simply putting food on pupils' plates?

The study was guided by Stufflebeam's CIPP Evaluation Model, which provides a framework for examining programme context, inputs, processes and products (Stufflebeam, 1971; Stufflebeam & Zhang, 2017). Maslow's Hierarchy of Needs Theory (1943) provided an additional explanation for the relationship between satisfaction of pupils' basic needs and educational participation. Together, the two perspectives provided a basis for examining the programme both as an intervention system and as a response to pupils' basic nutritional needs.

Theoretical Framework

2.1 CIPP Evaluation Model

The Context, Input, Process and Product model developed by Stufflebeam (1971) provides a comprehensive approach to programme evaluation. Rather than concentrating exclusively on final outcomes, the model examines the conditions that necessitate a programme, the resources available for implementation, the processes through which activities are delivered and the products or outcomes achieved.

In the context of school feeding, context concerns the nutritional, educational and socioeconomic circumstances that justify intervention. Input relates to resources such as government funding, food supplies, cooks, vendors, facilities and administrative arrangements. Process concerns procurement, food preparation, meal distribution, supervision and monitoring. Product concerns the resulting outcomes, including nutrition, educational participation, learning-related outcomes, local economic activity and household welfare.

The CIPP model was therefore appropriate because the study was designed as an evaluation rather than a narrowly correlational investigation. It enabled the School Feeding Programme to be assessed as a system in which inputs and processes influence multiple outcomes. It also provided a basis for interpreting implementation weaknesses alongside reported programme benefits.

2.2 Maslow's Hierarchy of Needs Theory

Maslow's Hierarchy of Needs Theory (1943) provides a complementary explanation of how satisfaction of basic physiological needs may influence human behaviour. Food constitutes one of the fundamental physiological needs. In the school context, pupils who experience hunger may have difficulty concentrating, participating and remaining engaged in classroom activities.

The relevance of Maslow's theory to school feeding lies in the possibility that provision of a regular meal during the school day addresses an immediate physiological need and creates more favourable conditions for school participation and learning. Kenrick *et al.* (2010) and Tay and Diener (2011) provide subsequent interpretations of needs and motivation that recognise the interaction among different human needs.

The theory therefore complements the CIPP model. While CIPP explains how the programme can be evaluated across its context, inputs, processes and products, Maslow provides a human-needs explanation for why food provision may influence educational participation.

Method

3.1 Research Design

The study adopted a descriptive survey design complemented by an ex-post facto design and a concurrent mixed-methods approach. Quantitative information was obtained through structured questionnaires and official enrolment records, while qualitative information was obtained through interviews with stakeholders involved in or affected by the programme.

The study covered public primary schools across Ondo State's 18 Local Governments and three senatorial districts. The population included stakeholders associated with the School Feeding Programme in 1,248 public primary schools. The population included 1,248 head teachers, 13,493 class teachers and 320,455 pupils, alongside programme-related stakeholders whose populations were not fixed in the available records.

3.2 Sample and Sampling Technique

The sampling plan produced 1,530 respondents, of whom 1,191 provided valid quantitative responses. Teachers constituted 576 respondents (48.4%), parents/guardians 402 (33.8%), community leaders 51 (4.3%), cooks/vendors 45 (3.8%), head teachers 36 (3.0%), farmers/suppliers 30 (2.5%), SUBEB officials 27 (2.3%) and school health officers 24 (2.0%). Rural respondents constituted 54.9% of the sample, while urban respondents represented 45.1%.

This multi-stakeholder composition enabled the evaluation to incorporate perspectives from those involved in programme administration, implementation, supply and beneficiary households.

3.3 Instruments and Data Analysis

The principal quantitative instrument was the School Feeding Programme Implementation Questionnaire (SFPIPQ). It measured six programme dimensions: nutrition and health; enrolment and attendance; educational outcomes; local agriculture support; employment and empowerment; and social development and poverty reduction.

The questionnaire had an overall Cronbach's alpha coefficient of .95. The six dimensions were operationalised through indicators including meal quality and quantity, menu variety, hygiene, pupils' health, admissions, attendance, retention, classroom concentration, punctuality, agricultural procurement, farmer income, employment opportunities, women's empowerment, household feeding costs and community participation.

Official enrolment data were obtained from the Ondo State Universal Basic Education Board (SUBEB) in the year 2024. Qualitative interview data were transcribed and analysed thematically using the framework of Braun and Clarke (2006). Descriptive statistics, including means, standard deviations and percentages, were used for the quantitative responses, while trend analysis was used for the available enrolment records.

Results

4.1 Quantitative Evidence

4.1.1 Overall Multidimensional Evaluation

The results demonstrate favourable stakeholder assessments across all six dimensions of the School Feeding Programme. Table 1 reveals all the six dimensions of evaluation of School Feeding Programme in public primary schools Ondo State, Nigeria

Table 1: Multidimensional evaluation of School Feeding Programme in public primary schools Ondo State, Nigeria

S/N	Evaluation Dimension	Mean	SD	Rating
1	Nutrition and health	3.52	0.54	Very High
2	Enrolment and attendance	3.51	0.53	Very High
3	Educational outcomes	3.44	0.52	High
4	Local agriculture support	3.44	0.55	High
5	Employment and empowerment	3.48	0.51	High
6	Social development and poverty reduction	3.45	0.52	High

Nutrition and health recorded the highest composite mean ($M = 3.52$), followed closely by enrolment and attendance ($M = 3.51$). Employment and empowerment recorded $M = 3.48$, social development and poverty reduction $M = 3.45$, while educational outcomes and local agriculture support each recorded $M = 3.44$. Thus, all six dimensions were assessed as either High or Very High.

4.1.1.1 Nutrition and Health

The nutrition and health dimension received a Very High overall rating ($M = 3.52$, $SD = 0.54$). The highest-rated indicator was that meals were nutritionally balanced ($M = 3.72$, $SD = 0.52$), followed by pupils appearing healthier since programme commencement ($M = 3.63$, $SD = 0.53$), improvement in pupils' overall wellbeing ($M = 3.60$, $SD = 0.52$), and meals meeting basic dietary requirements ($M = 3.57$, $SD = 0.55$). Reduction in cases of illness associated with poor nutrition recorded a comparatively lower but still High rating ($M = 3.43$, $SD = 0.52$).

The findings indicate strong stakeholder confidence in the programme's nutritional contribution. However, the qualitative evidence showed that meal standards varied across schools,

with differences reported in nutritional content. This suggests that favourable overall perceptions coexisted with implementation-level weaknesses.

4.1.1.2 Enrolment and Attendance

Stakeholders rated the programme's contribution to enrolment and attendance Very High ($M = 3.51$, $SD = 0.53$). School enrolment after programme introduction recorded $M = 3.61$, while improvement in daily attendance recorded $M = 3.56$. Punctuality was also rated very highly ($M = 3.52$). These findings indicate that respondents perceived the programme as contributing not merely to food provision but also to school participation.

Qualitative evidence reinforced this finding. Participants reported that provision of meals encouraged parents to enrol children and motivated pupils to attend school more regularly. The feeding programme was particularly perceived as beneficial to households with limited economic capacity because the school meal reduced part of the burden of feeding children during school hours.

4.1.1.3 Educational Outcomes

Educational outcomes were rated High overall ($M = 3.44$, $SD = 0.52$). The assessment focused on indicators such as classroom concentration and alertness, punctuality, academic performance, completion and transition. The findings suggest that stakeholders perceived improvements in learning-related behaviour following programme implementation.

The result is consistent with the thesis's programme logic in which improved nutritional wellbeing and regular attendance create conditions conducive to classroom participation. However, the evaluation does not attribute academic performance exclusively to school feeding because learning outcomes are also influenced by the broader school and home environment.

4.1.1.4 Local Agriculture Support

Local agriculture support was rated High overall ($M = 3.44$, $SD = 0.55$). The provision of a reliable market for local farmers' produce received a Very High rating ($M = 3.66$), while contribution to sustainable agricultural development was also rated Very High ($M = 3.52$). Direct benefit to smallholder farmers was comparatively lower, at approximately $M = 3.33$, although it remained within the High category.

The findings illustrate the home-grown component of the intervention. School feeding creates demand for food supplies and therefore provides a connection between public educational expenditure and agricultural markets. Nevertheless, the comparatively lower assessment of direct smallholder benefit indicates that local procurement does not necessarily mean that the smallest producers participate equally.

4.1.1.5 Employment and Empowerment

Employment and empowerment recorded a High overall rating ($M = 3.48$, $SD = 0.51$). Employment opportunities created by the programme recorded a Very High mean of 3.72 ($SD = 0.46$). Women's empowerment through cook/vendor participation recorded $M = 3.56$ ($SD = 0.51$), while community empowerment recorded $M = 3.56$ ($SD = 0.50$). Promotion of economic inclusion recorded $M = 3.52$ ($SD = 0.52$). Vendors' improved financial stability received a lower rating of $M = 3.43$ ($SD = 0.52$).

The results indicate that employment creation was one of the strongest perceived programme benefits. The high rating for women's empowerment is particularly consistent with the community-based delivery model involving cooks and vendors. However, the lower assessment

of vendor financial stability and the qualitative evidence concerning delayed payments show that employment creation did not necessarily translate into stable livelihood security.

4.1.1.6 Social Development and Poverty Reduction

Social development and poverty reduction recorded a High overall rating ($M = 3.45$). Alignment with national education and social development goals was rated Very High ($M = 3.57$), while reduction in household costs of feeding children also received a Very High rating ($M = 3.56$). Child development and social stability recorded $M = 3.47$, and support for vulnerable children's educational access recorded $M = 3.46$.

The reduction in household feeding costs indicates that the programme operated as an in-kind transfer to beneficiary households. Interview participants additionally reported improved social interaction, greater community participation and stronger community engagement. However, the findings do not suggest that school feeding alone eliminates household poverty or wider structural inequality.

4.1.2 Enrolment Trend of public primary school pupils in Ondo State, Nigeria

Table 2: Enrolment pattern during the School Feeding Programme in public primary schools in Ondo State, Nigeria between 2017 and 2023

Year	Rural	Urban	Total	Change
2017	NA	NA	NA	NA
2018	NA	NA	NA	NA
2019	111,128	125,317	236,445	-
2020	86,185	97,187	183,372	-19.5%
2021	106,017	119,550	225,567	+23.0%
2022	106,679	120,298	226,977	+0.6%
2023	NA	NA	NA	NA
Cumulative	410,009	462,352	872,361	-

Table 2 shows the complete official enrolment records that were available for 2019–2022 rather than for all seven years under review. Enrolment was highest in 2019 at 236,445 pupils. It declined by approximately 19.5% in 2020 to 183,372, coinciding with COVID-19-related school closures. Enrolment subsequently recovered to 225,567 in 2021 and 226,977 in 2022. Thus, the administrative evidence demonstrates disruption followed by substantial recovery rather than a simple linear increase.

Urban enrolment exceeded rural enrolment in every year with complete records. Cumulatively, urban schools recorded 462,352 enrolments compared with 410,009 in rural schools. Rural pupils therefore accounted for approximately 47% of the cumulative enrolment, while urban pupils accounted for approximately 53%. Local government variation was also substantial.

4.2 Qualitative Evidence

The qualitative findings were organised around four recurring themes: improved access to education and school participation; nutritional and health benefits; social and community development; and policy/systemic implications.

Participants consistently described improved enrolment, attendance, retention and learning concentration as important educational benefits. They also described improvements in

pupils' physical wellbeing and reductions in household feeding burdens. Community-level benefits included stronger interaction and participation, as well as economic activity among farmers, cooks and vendors.

At the same time, participants identified implementation concerns. Inconsistent funding and delayed payment of cooks and vendors were repeatedly identified as sustainability challenges. Participants also reported variation in meal quality and weaknesses in monitoring. Incomplete inclusion of smallholder farmers was another concern emerging from the evaluation.

Discussion

The findings demonstrate that the School Feeding Programme in Ondo State should not be evaluated solely through enrolment. Across the six dimensions examined, all composite ratings were High or Very High. This supports the multidimensional character of the NHGSFP and is consistent with the CIPP perspective that programme evaluation should consider programme processes and outcomes together (Stufflebeam, 1971; Stufflebeam & Zhang, 2017).

The strongest composite outcome was nutrition and health ($M = 3.52$). The particularly high rating for nutritional balance of meals ($M = 3.72$) supports the programme's immediate physiological purpose and corresponds with the nutritional rationale of school feeding described by Jomaa *et al.* (2011). Nevertheless, the qualitative evidence concerning differences in meal quality indicates that overall favourable perceptions should not obscure variation in implementation.

Enrolment and attendance constituted the second-highest composite outcome ($M = 3.51$). The high rating for increased school enrolment after programme introduction ($M = 3.61$) and daily attendance improvement ($M = 3.56$) supports the view that school feeding can function as a demand-side educational intervention. This finding is consistent with Nigerian evidence from other settings, including Adekunle and Ogbogu (2016), Agu *et al.* (2023), and Barnabas *et al.* (2024).

The administrative enrolment records provide an important qualification. Although enrolment was high in 2019, the sharp decline in 2020 coincided with COVID-19-related school closures. The subsequent recovery in 2021 and 2022 indicates that the enrolment pattern cannot be interpreted as a simple measure of programme success or failure. The non-experimental nature of the study also means that the observed changes cannot be treated as definitive causal effects attributable exclusively to school feeding.

The educational outcomes finding ($M = 3.44$) indicates favourable stakeholder perceptions of concentration, punctuality and other learning-related outcomes. However, the result should be interpreted as part of a contribution pathway rather than evidence that feeding alone determines academic achievement. The thesis itself recognises that school feeding operates within a broader educational environment.

The agriculture findings reveal another important dimension. The high rating for providing reliable markets for local farmers ($M = 3.66$) demonstrates the potential of the home-grown approach to connect school feeding with agricultural production. However, the comparatively lower smallholder farmer rating indicates that local procurement does not automatically guarantee equitable participation of small-scale producers.

Employment and empowerment recorded a High composite rating ($M = 3.48$), with employment creation receiving one of the highest individual ratings in the study ($M = 3.72$). Women's empowerment also received a Very High rating ($M = 3.56$). These findings demonstrate that the programme extends beyond pupils and schools into community livelihoods. However, the

lower rating for vendor financial stability ($M = 3.43$) and evidence of delayed payments indicate that employment creation and livelihood security should not be treated as synonymous.

Finally, social development and poverty reduction recorded a High composite rating ($M = 3.45$). Reduction in household feeding costs was rated Very High ($M = 3.56$), suggesting that school meals provided an important form of in-kind household support. The qualitative findings concerning community interaction and participation further demonstrate that programme effects extended beyond individual pupils. Nevertheless, school feeding should not be interpreted as a complete poverty-reduction intervention because household poverty extends beyond food expenditure.

Integrated Evaluation

Taken together, the findings reveal a coherent multidimensional programme pathway. Nutrition and health represent immediate pupil-level benefits; enrolment and attendance represent educational participation; educational outcomes reflect learning-related consequences; local agriculture connects the programme to food production; employment and empowerment extend benefits to cooks, vendors and community members; while social development and poverty reduction extend the intervention to households and communities.

The strength of this structure is that one public intervention can generate multiple forms of benefit. A school meal can address immediate hunger, reduce a household feeding expense, encourage school attendance, create demand for agricultural products and generate employment. This explains why evaluation confined to enrolment would fail to capture the full range of outcomes identified in the thesis.

At the same time, the findings show that the different dimensions are interconnected with implementation conditions. Funding instability can affect vendor payments; payment difficulties can affect food procurement and meal delivery; variations in meal delivery can affect nutritional quality; and these conditions can subsequently influence the educational and social benefits expected from the programme. The evaluation therefore confirms the importance of examining programme processes alongside programme outcomes.

Sustainability and Equity Implications

The evaluation identifies several implementation concerns that require attention if the benefits documented in the study are to be sustained. Predictable funding is important because continuity of meals and payment of vendors depend upon reliable financial flows. Meal quality also requires consistent standards and monitoring because the qualitative evidence identified differences in nutritional content across schools.

The agricultural objective requires attention to the participation of smallholder farmers. Although reliable markets for local farmers received a Very High rating, direct smallholder benefit was comparatively lower. This suggests that the home-grown procurement objective requires mechanisms capable of facilitating meaningful participation by smaller producers.

Equity is another important consideration. Urban enrolment exceeded rural enrolment throughout the years for which complete records were available. The difference does not by itself demonstrate differential programme effectiveness because population size and other contextual factors vary across locations. Nevertheless, it demonstrates that programme outcomes are geographically uneven and supports the need for closer attention to rural schools.

Monitoring is therefore central to sustainability. Programme records should provide sufficient information to assess meal delivery, enrolment, attendance and other outcomes. The CIPP model is relevant in this regard because implementation information is necessary for understanding why particular outcomes occur and where programme improvement is required.

Conclusion

This study evaluated the School Feeding Programme in public primary schools in Ondo State across six dimensions rather than treating enrolment as the sole indicator of programme performance. The results showed Very High stakeholder ratings for nutrition and health ($M = 3.52$) and enrolment and attendance ($M = 3.51$), while educational outcomes ($M = 3.44$), local agriculture support ($M = 3.44$), employment and empowerment ($M = 3.48$), and social development and poverty reduction ($M = 3.45$) were rated High.

The strongest individual outcomes included nutritional balance of meals, employment creation, women's empowerment, reliable markets for local farmers and reduction in household feeding costs. Qualitative evidence supported these findings by identifying improved educational access, nutritional wellbeing, community participation and economic activity as important programme benefits.

Administrative records, however, showed that enrolment was not a simple upward trend. Enrolment declined sharply in 2020 during COVID-19-related school closures and recovered substantially in 2021 and 2022. Urban enrolment also remained higher than rural enrolment across the available years. These findings indicate that programme outcomes should be interpreted within their broader implementation and contextual conditions.

The study concludes that the School Feeding Programme functioned as a multidimensional social intervention extending beyond food provision and enrolment to nutrition, learning-related outcomes, agriculture, employment, household welfare and community development. Its continued effectiveness, however, depends on predictable funding, timely payment of cooks and vendors, consistent meal-quality standards, effective monitoring, inclusive agricultural procurement and attention to rural–urban disparities.

Limitations of the study

The study relied substantially on stakeholder perceptions and qualitative accounts, which may be subject to recall and social-desirability influences. Complete administrative enrolment records were available only for 2019–2022, although the broader study period was 2017–2023. The non-experimental design also does not permit definitive causal attribution of changes in the six outcome dimensions exclusively to the School Feeding Programme. The findings should therefore be interpreted as evidence from a mixed-methods programme evaluation documenting perceived outcomes, administrative trends and implementation experiences.

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