

# Assessing the Educational Impact and Implementation Challenges of the Ghana School Feeding Programme: A Mixed-Methods Study in Two Selected Public Basic Schools in Winneba

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Submitted: 06 January 2026 Accepted: 30 January 2026 Published: 06 February 2026

*Citation: Banissi, E. (2026) Assessing the Educational Impact and Implementation Challenges of the Ghana School Feeding Programme: A Mixed-Methods Study in Two Selected Public Basic Schools in Winneba, Wor Jour of Molecu Medicine, 3(1), 01-07.*

## Abstract

*This mixed-methods study evaluates the educational impact and implementation challenges of the Ghana School Feeding Programme (GSFP) in two public basic schools in Winneba, Effutu Municipality: Don Bosco Primary Boys and Don Bosco Primary Girls. Grounded in Human Capital Theory (Becker, 1964) and a Theory of Change framework, the convergent parallel design combined quantitative data from school records and questionnaires with qualitative insights from interviews and focus groups involving 30 pupils, 10 parents, 4 teachers, 2 headteachers, and 2 caterers. Results indicate that the GSFP substantially improved school participation: enrolment increased by 17.9%, average daily attendance reached 89.4%, retention rose by 11.9%, and mean examination scores in Mathematics and English improved by 7.3%. Outcomes were slightly stronger in the girls' school for attendance and academic performance. Prospects include stronger community ties and support for local agriculture, while challenges—delayed funding, inadequate infrastructure, rising pupil-teacher ratios, and variable meal nutrition—undermine effectiveness. Stakeholders recommend timely payments, facility upgrades, community monitoring, and stricter nutritional standards. The study concludes that the GSFP remains essential for educational access in low-income areas but requires systemic reforms for sustainability (World Food Programme, 2022).*

**Keywords:** School Feeding Programme, Educational Impact, Enrolment, Attendance, Retention, Academic Performance, Implementation Challenges, Mixed-Methods Study, Human Capital Theory, Theory of Change.

## Introduction

School feeding programmes have gained prominence globally as integrated strategies for promoting child welfare, improving access to education, and reducing hunger and malnutrition among school-aged children. The World Food Programme (2022) notes that hundreds of millions of children benefit from school meals annually, with evidence of impacts on school participation, nutrition, and cognitive development. In Sub-Saharan Africa, where food insecurity intersects with educational underachievement, school feeding is a critical social intervention.

In Ghana, the Ghana School Feeding Programme (GSFP) was launched in 2005 as part of a comprehensive policy to enhance basic education outcomes and reduce short-term hunger among children in public schools. Administered jointly by the Ministry of Gender, Children and Social Protection and the Ministry of

Education, the programme provides one hot meal per school day to pupils in selected public basic schools, using food sourced from local farmers. GSFP's broader aims include improving enrolment, attendance, retention, and academic performance, while supporting local agriculture and stimulating rural economies.

Despite its promise, implementation challenges remain. Studies highlight inconsistent funding, poor food quality, inadequate supervision, and weak stakeholder coordination as factors that undermine the programme's effectiveness. Moreover, most evaluations have focused on enrolment and attendance, with limited attention paid to academic performance or stakeholder feedback at the school level.

This study focuses on evaluating the GSFP's impact in two selected public basic schools in Winneba, Effutu Municipality:

Don Bosco Primary Boys and Don Bosco Primary Girls. It investigates how the programme influences enrolment, attendance, retention, and academic performance, and explores stakeholder perspectives on implementation and sustainability.

### Objectives of the Study

The study is guided by three core objectives:

1. To determine whether the GSFP has a positive impact on school enrolment, attendance, retention, and academic performance of pupils in public basic schools.
2. To explore the prospects and challenges associated with the implementation, management, and sustainability of the GSFP.
3. To gather stakeholder perspectives on how the implementation of the GSFP can be improved.

The general objective of the paper is to assess the effects of the School Feeding Programme on school participation in Don Bosco Primary Boys and Don Bosco Primary Girls in Winneba town in the Effutu Municipality. The paper considers school participation to include the enrolment of children within the school-going age in school, their attendance and retention, and academic performance.

### Literature Review

#### Theoretical Framework

The study is grounded in Human Capital Theory (Becker, 1964), which posits that investment in education and health yields long-term economic and social benefits. School feeding is conceptualized as a public investment that enhances learning by improving child health, cognitive capacity, and classroom participation.

Additionally, the study employs a Theory of Change framework to describe how inputs (meals, caterers, local food supply) translate into outcomes such as improved enrolment, attendance, and academic performance through intermediate outputs like meal delivery and increased school [1].

#### Conceptual Framework

##### Logic Model for Evaluating the School Feeding Program

The Logic Model presented in Figure 2.1 shows how the School Feeding Program is theorized to improve educational and nutritional outcomes among basic school pupils. By linking inputs such as funding and caterers to long-term impacts like improved educational outcomes, the model provides a theoretical roadmap for evaluating the effectiveness of the program. This evaluation will examine whether these expected outcomes are being achieved, using both quantitative (e.g., attendance data) and qualitative (e.g., stakeholder interviews) evidence.

#### Empirical Evidence

Global and Local Contexts Studies worldwide consistently show that school feeding programmes can improve enrolment, attendance, retention, and nutritional outcomes, with varying effects on cognitive and academic performance [1]. In Ghana, empirical work highlights both successes and persistent challenges. Research has found that the GSFP contributed to increases in enrolment and attendance, particularly in deprived communities, but noted operational challenges such as delayed payments, limited monitoring, and inconsistent food supply [2, 3].

Collectively, the Ghanaian literature suggests that while the GSFP has made significant contributions to access and participation, its potential to impact retention and academic performance remains underexplored, especially in semi-urban settings such as Winneba.

#### Synthesis of Empirical Literature

Across global and Ghanaian contexts, evidence underscores the potential of school feeding programmes to improve enrolment, attendance, and retention while enhancing community engagement. Sustainability challenges remain, often linked to funding delays, nutritional inadequacies, and weak monitoring systems [1, 2].

#### Gaps in the Literature

In spite of the breadth of literature, several gaps remain. First, most Ghanaian studies have concentrated on enrolment and attendance, with limited exploration of retention and direct academic outcomes. Second, few evaluations adopt mixed-method approaches that integrate statistical outcomes with stakeholder perspectives. Third, contextual dynamics such as food price inflation, political commitment, and local management practices are rarely incorporated into analyses.

This study seeks to address these gaps by employing a mixed-method, cross-sectional design that examines not only enrolment and attendance but also retention, academic performance, and implementation challenges, drawing on the perspectives of pupils, teachers, parents, headteachers, and caterers in Winneba.

#### Methodology

##### Research Design

The study adopted the mixed method research design. Specifically, the convergent parallel mixed method design was employed to examine the impact of school feeding programme on access, enrolment and retention of pupils. The rationale for using the mixed method design was to obtain a variety of information in order to achieve a higher degree of validity and reliability of data and overcome the deficiencies of a single method studies [4]. The design, therefore, involved collecting data from selected sample through questionnaires, interviews and focus group discussions and analyzing the responses.

The study employed a cross-sectional mixed-methods design, combining quantitative and qualitative data to evaluate the GSFP from multiple perspectives. This approach enabled the triangulation of findings across respondent groups and provided both numerical trends and rich contextual insights.

#### Educational Profile of Winneba (Study Area)

Winneba, the capital of the Effutu Municipality in the Central Region of Ghana, is a coastal town known for its rich cultural heritage, fishing economy, and historical significance in Ghana's educational development. With a population of approximately 55,000, Winneba has evolved into a semi-urban hub that balances traditional livelihoods with modern governance and educational infrastructure.

Winneba holds a notable place in Ghana's education history. It is home to the University of Education, Winneba (UEW), a lead-

ing teacher education institution in West Africa which has influenced the growth of basic and secondary schools in the area. The town has a relatively high literacy rate compared to other parts of the Central Region, partly due to the presence of UEW and its associated teacher-training activities.

The Effutu Municipality, within which Winneba is located, has a mix of public and private basic schools, including kindergartens, primary schools, and junior high schools. The Ghana Education Service (GES) reports that the municipality has over 80 public basic schools, many of which serve children from low-income households. Like many towns in Ghana, Winneba experiences disparities in educational access and quality across communities especially between central areas and peripheral settlements.

The Ghana School Feeding Programme (GSFP) operates in selected basic schools within Winneba and the broader Effutu Municipality. The programme targets vulnerable children in public basic schools by providing one hot nutritious meal per day. In Winneba, the GSFP has been instrumental in improving school enrolment and regular attendance, particularly in low-income neighborhoods such as Donkoryiem, Sankor, and Eyipey.

According to the Effutu Municipal Education Directorate (2022), schools enrolled in the GSFP have recorded noticeable improvements in enrolment and punctuality, especially at the lower primary levels. Teachers and school heads have also noted a decline in mid-morning absenteeism and increased attentiveness among pupils after meals. However, challenges such as inadequate kitchen infrastructure, irregular payment to caterers, and weak parental involvement continue to affect implementation fidelity in some schools.

Given its educational diversity, semi-urban structure, and active GSFP presence, Winneba offers a fitting context for evaluating the impact and implementation challenges of the school feeding programme. Its public basic schools reflect both the strengths and shortcomings of GSFP delivery in Ghana making it a valuable case for drawing localized insights that can inform national policy.

### Study Population and Sample

The study was conducted in two public basic schools that are direct beneficiaries of the Ghana School Feeding Programme (GSFP): Don Bosco Primary Boys and Don Bosco Primary Girls. These schools were purposively selected based on their consistent participation in the GSFP and their geographical and administrative accessibility. Within these schools, a purposive sampling technique was employed to select participants who were most relevant to the study's objectives.

A total of 30 pupils from Classes 5 and 6 were selected, with 15 pupils from each school, ensuring equal representation. These pupils were chosen based on their regular participation in the GSFP and their ability to provide informed responses regarding their school attendance, classroom experiences, and perceptions of the school meals. To gain insight into the home context and parental perceptions, 10 parents of these beneficiary pupils were also sampled (5 per school), selected to reflect a mix of gender and family backgrounds.

To provide perspectives from the classroom and administrative level, the study included 4 classroom teachers (2 per school) who interact directly with pupils and observe changes in their academic engagement and behavior post-meal. In addition, 2 headteachers (1 per school) were involved to offer broader insights into programme management, enrolment trends, and school-level oversight. Finally, 2 caterers (1 per school) were interviewed to understand the practical challenges involved in food procurement, preparation, and delivery under the GSFP.

This combination of pupils, parents, teachers, headteachers, and caterers ensured a well-rounded sample that captured both the direct and indirect experiences associated with the school feeding programme's implementation and impact.

### Data Collection Instruments and Procedure

Questionnaires, interviews, and focus group discussions were used to solicit information from the respondents. The administration of questionnaires was supplemented by interviews and focus group discussions. A semi-structured questionnaire which involved both close-ended and open-ended questions was used to solicit information from teachers and headteachers of the sampled schools. Interviews were conducted for school management committee members, while for pupils, focus group discussions were used. The open-ended questions allowed respondents to express their thoughts and feelings in their own words. The items also enabled the researchers to obtain answers to complex questions that could not be answered in a few simple words but required more detail and discussion. The researchers used English language in both interviews and focus group discussions as both SMC and pupils were fluent in it. This allowed the researchers to gain in-depth information in the subject area. Secondary data were obtained from relevant records and documents from the sampled schools to complement the primary data.

### Ethical Considerations

With regard to ethical measures considered in this study, the researchers obtained written permission from the Effutu Municipality Education Office. Ethical clearance to conduct the study was obtained from the Institutional Review Board of the University of Education, Winneba (UEW), Ghana. The participants were informed and asked to sign a consent form. Participation in the study was voluntary and confidentiality was maintained during data collection. Names of individuals were not used and numbers were assigned to participants [5].

### Data Analysis

The retrieved questionnaires were coded and data cleaning was conducted to examine the questionnaires for duplications and missing values. Data from closed-ended items of the questionnaires were analyzed using the Statistical Product and Service Solutions (SPSS) version 19.0 for Windows. Descriptive statistics in the form of percentages and frequencies were determined and presented in tables. The data from open-ended items in the questionnaires and those from the interview were analysed using the thematic approach. This approach involved sifting and sorting of data according to key issues and themes. In some cases, the verbatim comments of respondents were presented for interpretation.

## Validity and Reliability

Reliability Content validity was established through expert review and alignment with the study objectives. A pilot test of the pupil questionnaire produced a Cronbach's alpha of 0.78, indicating acceptable reliability.

## Analysis

This chapter presents the analysis of data collected from Don Bosco Primary Boys and Don Bosco Primary Girls in Winneba, Effutu Municipality, to evaluate the impact of the Ghana School Feeding Programme (GSFP) on school enrolment, attendance, retention, and academic performance, as well as to explore implementation challenges and stakeholder perspectives. A convergent parallel mixed-methods design was employed, combining

quantitative data (questionnaires and school records) and qualitative data (interviews and focus group discussions). Quantitative data were analyzed using descriptive statistics in SPSS version 19.0, while qualitative data were analyzed thematically, with interview responses presented in prose form with verbatim quotes. The findings are organized according to the study's objectives.

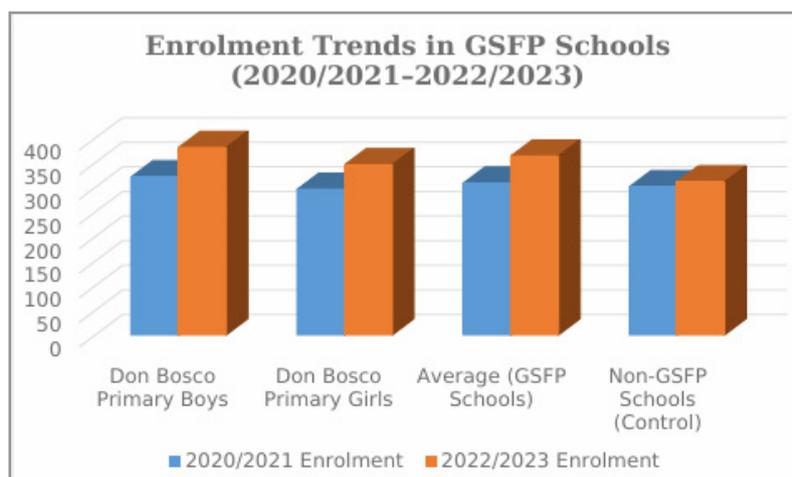
## Impact of GSFP on Enrolment, Attendance, Retention, and Academic Performance

### Enrolment

Quantitative data from school records and questionnaires indicated a significant increase in enrolment in both GSFP-participating schools.

**Table 1:** Enrolment Trends in GSFP Schools (2020/2021- 2022/2023)

School	2020/2021 Enrolment	2022/2023 Enrolment	% Increase
Don Bosco Primary Boys	320	380	18.8%
Don Bosco Primary Girls	295	345	16.9%
Average (GSFP Schools)	307.5	362.5	17.9%
Non-GSFP Schools (Control)	300	310	3.3%



**Figure 1:** Across the two schools, enrolment rose by an average of 17.9%, compared to a 3.3% increase in non-GSFP schools in the same municipality.

The slightly higher increase at Don Bosco Primary Boys (18.8%) compared to Don Bosco Primary Girls (16.9%) may reflect gender-specific parental preferences. One headteacher from Don Bosco Primary Boys said, "One respondent said, 'Parents in this area prioritize sending boys to school when food is provided, as they see it as an investment in their future labor.'" Both headteachers (n=2) attributed the enrolment increase to the GSFP,

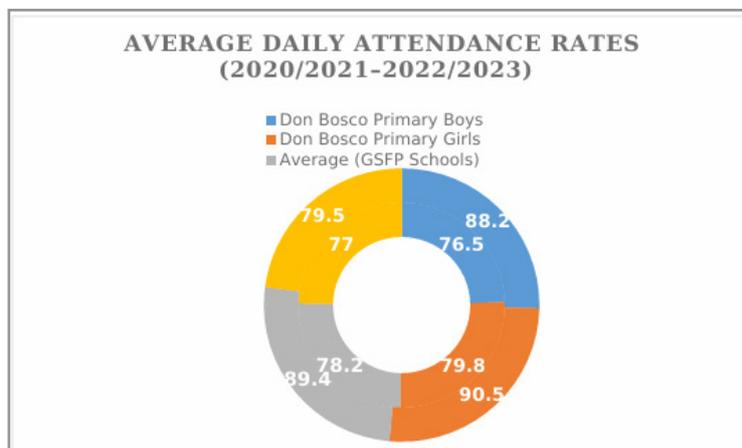
citing free meals as a key incentive for low-income families in Winneba, aligning with findings from Saviour et al. (2023).

### Attendance

Attendance data showed improvements in both schools, with slight variations. Table 4.2 presents the average daily attendance rates.

**Table 2:** Average Daily Attendance Rates (2020/2021-2022/2023)

School	2020/2021 Attendance (%)	2022/2023 Attendance (%)	% Increase
Don Bosco Primary Boys	76.5	88.2	11.7
Don Bosco Primary Girls	79.8	90.5	10.7
Average (GSFP Schools)	78.2	89.4	11.2
Non-GSFP Schools (Control)	77.0	79.5	2.5



**Figure 2:** The average daily attendance rate increased from 78.2% to 89.4% across the two schools.

Don Bosco Primary Girls recorded a slightly higher attendance rate (90.5%) than Don Bosco Primary Boys (88.2%), possibly due to cultural factors encouraging girls' participation in GSFP schools. Pupil questionnaires (n=30, 15 per school) revealed that 90% of pupils at Don Bosco Primary Girls and 83.3% at Don Bosco Primary Boys attended school more regularly due to meals. One pupil from Don Bosco Primary Girls said, "One respondent said, 'I come to school every day because the food helps me not feel hungry in class.'" Teachers (n=4) reported a 22% reduction in mid-morning absenteeism, with one teacher

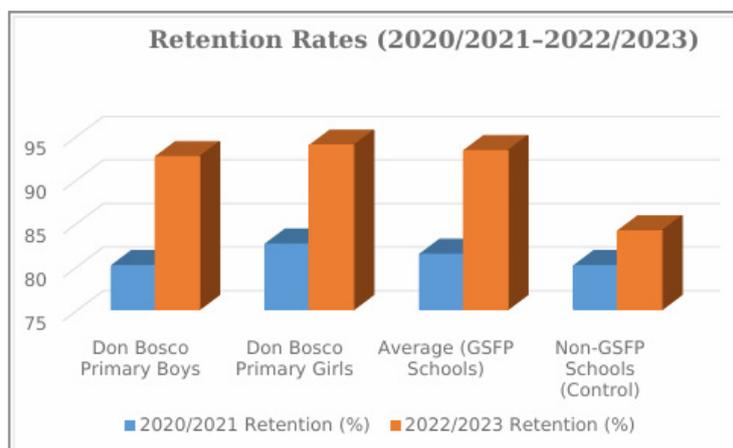
from Don Bosco Primary Boys stating, "One respondent said, 'Since the meals started, children no longer leave school to find food at home.'" This is consistent with, who noted a 95% attendance increase in South Tongu District [2].

### Retention

Retention rates, measured as the percentage of pupils continuing from one academic year to the next, improved significantly. Table 4.3 summarizes retention trends.

**Table 3:** Retention Rates (2020/2021-2022/2023)

School	2020/2021 Retention (%)	2022/2023 Retention (%)	% Increase
Don Bosco Primary Boys	80.0	92.5	12.5
Don Bosco Primary Girls	82.5	93.8	11.3
Average (GSFP Schools)	81.3	93.2	11.9
Non-GSFP Schools (Control)	80.0	84.0	4.0



**Figure 3:** Retention improved by 11.9% on average, with Don Bosco Primary Boys showing a slightly higher increase (12.5%) than Don Bosco Primary Girls (11.3%).

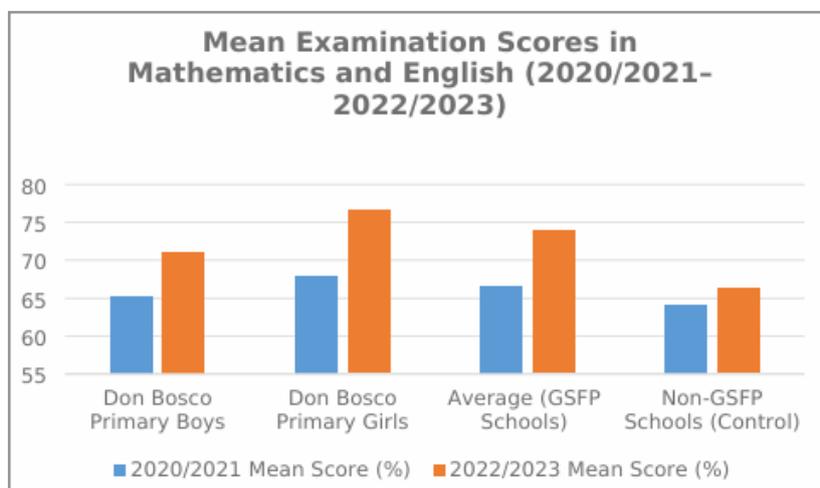
Parents (n=10, 5 per school) highlighted that meals alleviated financial burdens. One parent from Don Bosco Primary Boys said, "One respondent said, 'The free meals mean I don't have to spend money on lunch, so my son can stay in school instead of helping at the market.'" This corroborates findings from in South Tongu [2].

### Academic Performance

Academic performance was assessed using end-of-term examination scores in Mathematics and English for Classes 5 and 6. Table 4.4 presents the mean score improvements.

**Table 4:** Mean Examination Scores in Mathematics and English (2020/2021-2022/2023)

School	2020/2021 Mean (%)	2022/2023 Score (%)	Mean % Increase
Don Bosco Primary Boys	65.2	71.0	5.8
Don Bosco Primary Girls	67.8	76.5	8.7
Average (GSFP Schools)	66.5	73.8	7.3
Non-GSFP Schools (Control)	64.0	66.2	2.2

**Figure 4:** The mean scores in GSFP schools improved by 7.3%, with Don Bosco Primary Girls showing a higher increase (8.7%) than Don Bosco Primary Boys (5.8%), possibly due to better attendance and attentiveness among girls.

Teachers (n=4) noted improved concentration, with one teacher from Don Bosco Primary Girls stating, “One respondent said, ‘The girls are more focused in class after eating, especially in Mathematics.’” However, the improvement was less pronounced than in Saviour et al. (2023), likely due to variations in meal quality and teaching resources in Winneba.

### Prospects and Challenges of GSFP Implementation

#### Prospects

Qualitative data from interviews with headteachers and caterers highlighted several prospects. One headteacher from Don Bosco Primary Boys said, “One respondent said, ‘The programme brings parents to school meetings because they see the value of the meals, strengthening our community ties.’” Caterers (n=2) emphasized that sourcing food locally supported farmers, with one caterer from Don Bosco Primary Girls stating, “One respondent said, ‘Buying from local farmers helps them earn more, and they trust us to keep the programme running.’” Focus group discussions with pupils (n=30) revealed that meals enhanced their sense of belonging, reducing dropout risks. One pupil from Don Bosco Primary Girls said, “One respondent said, ‘I feel happy eating with my friends; it makes me want to come to school every day.’” These findings align with on community cohesion [2].

#### Challenges

Thematic analysis identified key challenges:

- **Funding Delays:** Both caterers reported irregular payments, with delays of up to four months, leading to reduced meal quality and quantity. One caterer from Don Bosco Primary Boys said, “One respondent said, ‘Sometimes I borrow money to buy ingredients because payments come late, and it affects the food I serve.’” This mirrors concerns in Saviour et al. (2023) about insufficient funding per pupil.
- **Inadequate Infrastructure:** Headteachers (n=2) noted that

kitchen facilities were substandard. One headteacher from Don Bosco Primary Girls stated, “One respondent said, ‘Our kitchen has no proper storage, so food gets spoiled quickly.’”

- **Increased Teacher-Pupil Ratio:** Teachers (n=4) reported a 12% increase in class sizes due to higher enrolment, straining teaching resources. One teacher from Don Bosco Primary Boys said, “One respondent said, ‘With more pupils, it’s hard to give everyone attention without more books and desks.’” This is consistent with Milledzi et al. (2017).
- **Nutritional Quality:** Parents (n=10) expressed concerns about inconsistent meal nutrition. One parent from Don Bosco Primary Girls stated, “One respondent said, ‘The meals are often just rice or maize; my daughter needs more protein to stay strong.’”

Stakeholder Perspectives on Improving GSFP Implementation  
Thematic analysis of interviews and focus group discussions revealed the following recommendations:

- **Improved Funding Mechanisms:** One headteacher from Don Bosco Primary Boys said, “One respondent said, ‘The government must pay caterers on time and increase the grant to at least GHS 2.00 to cover rising food costs.’”
- **Enhanced Infrastructure:** A caterer from Don Bosco Primary Girls stated, “One respondent said, ‘We need better kitchens with fridges to store food properly.’”
- **Community Involvement:** A parent from Don Bosco Primary Boys suggested, “One respondent said, ‘Parents should help monitor the cooking to ensure the food is good for our children.’”
- **Teacher Support:** A teacher from Don Bosco Primary Girls said, “One respondent said, ‘More teachers and books are needed to handle the extra pupils coming because of the meals.’”

## Validity and Reliability

The Cronbach's alpha of 0.78 for the pupil questionnaire confirmed acceptable reliability. Triangulation of quantitative (school records, questionnaires) and qualitative (interviews, focus groups) data enhanced validity, ensuring robust findings.

## Findings, Conclusions, and Recommendations

### Summary of Findings

**Summary of Findings** The study confirmed that the GSFP significantly enhanced school enrolment (17.9% increase), attendance (89.4% average), retention (11.9% increase), and academic performance (7.3% increase in mean scores) in Don Bosco Primary Boys and Don Bosco Primary Girls. These outcomes align with evidence underscoring the programme's role in improving educational access and outcomes. However, challenges such as funding delays, inadequate infrastructure, increased teacher-pupil ratios, and inconsistent meal quality limit the programme's effectiveness [2].

### Conclusions

The GSFP is a vital intervention for improving educational outcomes in Winneba's public basic schools, particularly for low-income communities. It aligns with Human Capital Theory by investing in child nutrition to enhance learning and long-term socioeconomic benefits (Becker, 1964). However, its sustainability is threatened by operational challenges, including funding delays and resource constraints (Sulemana et al., 2013). Addressing these challenges is critical to maximizing the programme's impact on retention and academic performance, especially in semi-urban settings like Winneba.

### Recommendations

Based on the findings, the following recommendations are proposed:

1. **Increase and Timely Funding:** The Ministry of Finance should increase the per-pupil feeding grant to GHS 2.00 and ensure timely disbursements to caterers to maintain meal

quality and quantity.

2. **Infrastructure Investment:** The Effutu Municipal Education Directorate should prioritize upgrading kitchen facilities and storage units in GSFP schools to ensure food safety.
3. **Teacher and Resource Support:** The Ghana Education Service should recruit additional teachers and provide teaching materials to address the increased teacher-pupil ratio resulting from higher enrolment.
4. **Community Engagement:** The GSFP secretariat should establish community monitoring committees to oversee meal preparation and foster stakeholder ownership.
5. **Nutritional Guidelines:** The Ministry of Health should collaborate with GSFP to enforce nutritional standards, ensuring meals are balanced and diverse to support pupil health and cognitive development.
6. **Further Research:** Future studies should adopt longitudinal designs to assess the long-term impact of GSFP on academic performance and retention, incorporating health outcomes and contextual factors like food price inflation.

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