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Effects of the Ghana School Feeding Programme on Enrolment, Attendance and Drop-out rate in Basic Schools in Savelugu-Nanton District

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Abstract

For reasons of its geographical location, colonial legacies and cultural practices, the Savelugu-Nanton District is characterised by high illiteracy rate, poverty and low school attainments. The Savelugu-Nanton District was a beneficiary district during the five year piloting of the Ghana School Feeding Programme. The objectives of the study were to examine the effectiveness of the implementation processes of the GSFP and assess the effect of the policy on school attainments in the beneficiary schools and to suggest recommendations towards improving its management. The study employed triangulation. Survey instruments were administered on a study sample of 53 respondents selected purposively from the GSFP institutional set up and major stakeholders. Survey reports and content analysis of published records were used to examine the policy implementation processes. Four schools were selected through probability sampling and Analysis of Variance was used to compare intervention effects on school attainments. The study revealed irregular funding, poor collaboration and participation by the major stakeholders and the non compliance with the selection criteria for beneficiaries and an irregular school feeding. The programme produced no effect on enrolment and attendance except for drop-out numbers. The study concluded that the implementation processes were not so effective and therefore, failed to achieve any influence on school attainments in the study area. The study recommended to government to involve key stakeholders to reformulate the policy through Parliament into a statute and set standards for management and stakeholder participation. The new statute must incorporate budgetary funding.

Keywords: food insufficiency, school feeding programme, policy implementation processes, school attainments.

Introduction

Studies have shown that providing free meals to school pupils increases school attainments. Motivation theory supports this observation where people who lack food respond appropriately when their food needs are met. The study area, Savelugu-Nanton District, is in the Northern Region where food insufficiency lasts for an average of five months each year. School

attainments are low; enrolment at 65-70 percent falls below the national average of 80%, and the 60 percent attendance rate is below the national average of 86 percent and adult literacy rate of 22.3 percent is abysmally below the national average of 69 percent. These characteristics of the region are attributed to its geographical location, colonial legacies and cultural practices (Quaye, 2008; Ghana Statistical Service, 2008; Savelugu-Nanton District Assembly, 2010).

Poverty is claimed by UNESCO (1995) as the main cause of millions of pupils deprived of educational opportunities worldwide. Jyoti, Frongillo and Jones (2005) have noted that some school children *attend school on empty bellies or participate in family labour before school*. In *marginalised communities*, Rutledge (2009) and Morris (2003) contend that it is emerging as a policy that there is a public responsibility beyond the family to feed school children worldwide. These observations inform state involvement in the provision of free school meals as an opportunity for improving school attainments in rural poor communities. This practice is underscored by the principle that people have a right to a fair share of the resources of the state. This is central to the theory of distributive justice where the state shows responsibility in protecting the poor, particularly children who become hardest hit by food insecurity during crisis.

Africa has 49 per cent of the 77 million children worldwide who are not in school (Afoakwa & Chiwona-Karlton, 2007) and in Ghana, Reuters (2009) reports that over a million children are out of school because they work to support family income. Based on these facts, the Ghana School Feeding Programme (GSFP) was established in 2005 and designed to address the persistently low school attainments in poor rural communities. The design of the school feeding policy conforms to the tenets of motivation theory to bring about improved school attainments as well as the theory of distributive justice for the welfare efforts of the state in protecting the vulnerable in society.

The operationalisation of the policy must therefore lead to the achievement of stated objectives. Implementation theory provides the principles whereby policy outcomes can be evaluated. As stated by Hargrove (1981) and Ryan (1996), these include the existence of a formal legislation, clear and consistent policy objectives, compliance by implementers with the law and institutional support, among others. In principle, the attainment of the objectives of the GSFP is premised on effective implementation of the policy. Therefore, a study of the level of achievement of GSFP objectives must be studied with how effective the policy has been implemented.

There were in all six beneficiary schools in the study area. However, to obtain statistically valid assessment of the programme outcomes, Tibali and Kpalung primary schools that were beneficiaries throughout the piloting of the GSFP were selected for this evaluative study. The objectives for the study were to examine the implementation processes for effectiveness and to assess the effect of the programme on enrolment, attendance and drop-out in the beneficiary district. The rest of the paper provides the theoretical and conceptual issues and methodology that underpin the study; it is then followed by discussion of the results and conclusions as well as policy implications.

Theoretical and conceptual issues

Graves (2001) recognises motivation as intrinsic, based on personal interests, desires and the need for fulfilment. Sirgy (1986) used Abraham Maslow's concept of a progression from lower-order to higher-order needs and stressed that since lower-order needs have a higher pre-potency than higher-order needs, the individual is motivated to satisfy lower-order needs before taking steps to meet higher order-needs. Oleson (2004) drew the conclusion that a person lacking food, safety, love, and esteem would most probably hunger for food more strongly than anything else with all other needs relegated to the background. Motivation theory, therefore, underpins the responsiveness of the rural poor to programmes that entail food benefits. In communities where food insufficiency is prevalent, parents enrol their children in school to reduce domestic food burden while the enrolled children attend school regularly to receive free lunch daily.

As stated by Arneson (2006), distributive justice entails equalizing mid-fare levels across persons. Mid-fare levels as explained by Sen (1982) and cited by Roemer (1996), refer to a plurality of functioning of doings and beings that people have reason to value so far as they are seeking their own well-being. Roemer (1996) further stated that society should care about how much of the good things of life people get as well as how evenly they are distributed. Caney (2001) also stated that all humans have rights, and among these are the right to economic resources. By accepting the civil and political rights of the individual, the subsistence rights must as well be accepted. Caney (2001) concludes that everyone has a right to equal freedom and accordingly each is entitled to an equal amount of the earth's resources.

The productivity of the rural poor who are mainly illiterate is low for overreliance on low production technologies. UNICEF (2006) reports that for every extra year of primary education there is an increase in a person's productivity by ten to 20 percent. An improvement in enrolment, attendance and drop-out motivated by school feeding leads to improved literacy levels and productivity of the rural people. The allocation of resources to the GSFP

by the state to facilitate school feeding is directed at protecting the subsistence rights of the people and a means to a fair distribution of state resources to the people. The theory of distributive justice underscores the use of GSFP to achieve improved school attainments to place the rural poor in a state of preparedness to seek their own well-being.

Mazmanian and Sabatier (1983) as cited by DeLeon and DeLeon (2002) summarise implementation theory as:

The process normally runs through a number of stages beginning with passage of the basic statute, followed by the policy outputs (decisions) of the implementing agencies, the compliance of target groups with those decisions, the actual impacts of agency decisions, and, finally, important revisions (or attempted revisions) in the basic statute (pp. 20-21).

To assess government programmes, Hargrove (1981) suggested two issues; that actions required by law are carried out and that they encompass both formal compliance with the law and organisational routines consistent with compliance. Furthermore, Hargrove (1981) stated that a policy statement must be in the form of an enabling legislation; this mandates clear and consistent policy objectives that incorporate a sound causal theory and gives implementing officials sufficient justification to attain, at least potentially, the desired goals. These views were corroborated by Ryan (1996). The key principles identified for the successful implementation of a policy are: roles of the implementing structures, commitment and management skills of implementing officials and agencies, the commitment and active support of organized interest groups, the public, politicians and/or senior officials.

Evaluation of the effectiveness of implementation of a policy is based on an examination of the processes through which policy outputs were established and how responsibilities have been complied with. In the case of the GSFP, the institutional setup and responsibilities are: national and regional secretariats, district, school and community implementation committees, participation by target groups, provision of logistics, selection of beneficiaries and the daily feeding of pupils in school. Direct policy outcomes emanating from GSFP objectives are improved schooling and poverty reduction. Implementation theory is therefore the theoretical construct underpinning this study.

School attainments in this paper represent schooling indicators examined and refer to enrolment, attendance and drop-out numbers. These have been referred to by some scholars as schooling or educational attainments. Enrolment refers to the number of pupils admitted to class one at the commencement of each academic year to start schooling. Attendance is

measured as the number of days pupils report to school which is marked against a pupil's name in the class register. The class register provides a summary of weekly and a term's attendance for each pupil. The study used an average attendance per term. The drop-out numbers referred to pupils in one class who fail to advance to the next class and are found wandering in the community; excluding pupils who relocate from the community with parents or deaths.

Around the globe, the poor experience food insecurity and hence face malnutrition which in early childhood is known to reduce children's intellectual capacity and achievement. This may lead to significant functional impairment in adult life as a result of delayed mental development. Making these observations, **Jyoti, Frongillo and Jones (2005)**, noted that children also suffer most in their social skills and abilities. The United States started the National School Lunch in 1946 to solve the problem of functional impairment observed in young recruits into the army as a result of childhood malnutrition (Morris, 2003; Rutledge, 2009). School feeding is now a popular social safety net programme to protect the children of poor communities from hunger and malnutrition.

Bundy et al. (2008) assert that school feeding programmes provide an important new opportunity to assist poor families and feed hungry children. These programmes have the potential to combat hunger and support nutrition through micronutrient fortified food and de-worming. They can provide an incentive for poor families to send their children to school –and keep them there, while improving their children's education.

School feeding in Ghana has largely been pioneered by the Catholic Relief Services (CRS) and the Adventist Development and Relief Agency (ADRA) from the early 1950s (CRS, 2010; McGill, 2009). Ghana adopted the CAADP Pillar III protocol in 2005 and established the GSFP. Under the policy, children in public primary schools and kindergartens would be served with one hot adequately nutritious meal prepared from locally grown foodstuffs, on every school day. The programme was piloted for five years with 10 pilot schools based on a project manual in 2005. In the second year, the up scaling was based on a planned distribution formula (PDF) of five (5) schools per each of the 138 districts in Ghana. At the time of this study, there were 656,624 beneficiary pupils out of which 40,320 were in the Northern Region representing six percent of beneficiaries.

The programme was funded largely by the government of Ghana (78%) with support from strategic partners including the Embassy of the Kingdom of Netherlands (17%) and the World Food Programme (5%). The Netherlands Development Organisation (SNV), School Feeding Initiative Ghana

Netherlands (SIGN) and other agencies provided technical support. The main objectives were to reduce hunger and malnutrition, increase school enrolment, attendance and retention and boost domestic food production. The collaborating ministries are the Ministries of Education, Health (and the GHS), Agriculture, Finance and Economic Planning and Women and Children Affairs. The organogram of the institutional setup is adapted as the conceptual framework for the study showing the relationships between target groups, decisions and programme outcomes based on GSFP objectives.

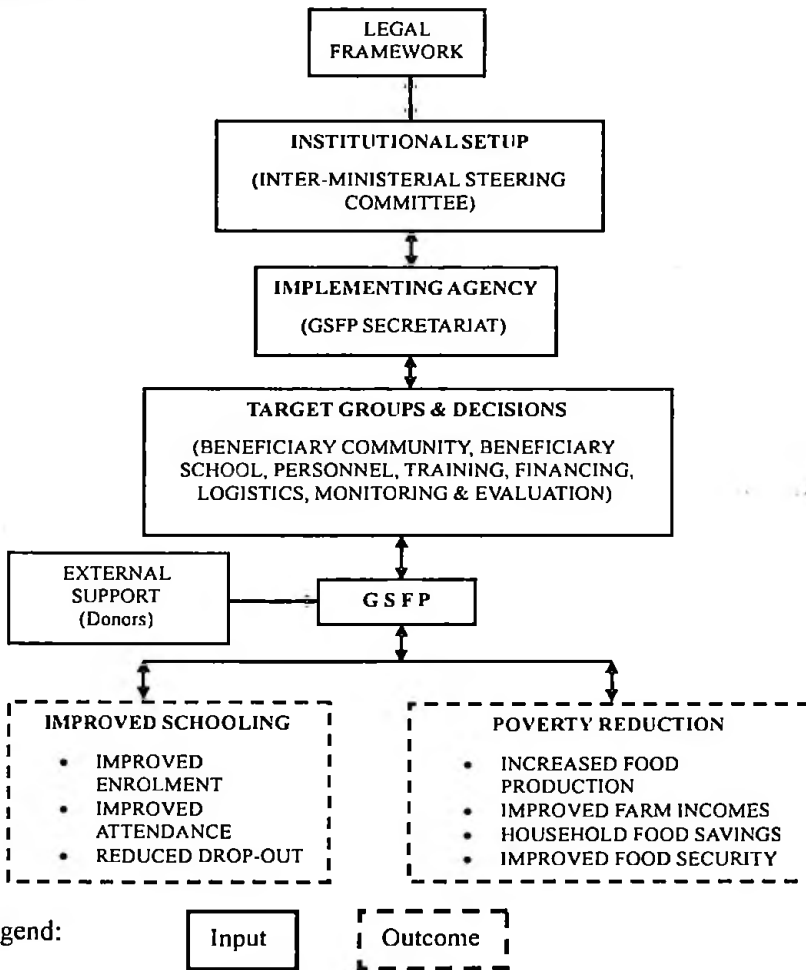


Figure 1: The GSFP implementation process: input and outcome
 Source: Adapted from Government of Ghana (2007)

Methodology

The study used an evaluative design to examine the implementation processes and assessed the effect of the school feeding programme on enrolment, attendance and drop-out in basic schools in the study area. Triangulation was employed to offer the advantage of considering the issues in more than one perspective in order to enrich knowledge and test validity (Sarantakos, 2005).

The selection of the Savelugu-Nanton District for the study area was informed by the fact that poverty in the district has a long history reinforced by its geographical location and cultural practices of the people. The district is one of the 18 administrative districts of the Northern Region considered a deprived region in Ghana (Sutton, 1989; Songsore, 2003; Poel et al., 2007). It is located 5 km away from the regional capital, Tamale. The district receives a maximum rainfall of 1050 mm in a single rainy season and a long dry season from November to April. The projected population from the 2000 census data is 127,155 with a growth rate of 2.8 percent (Savelugu-Nanton District Assembly, 2010). Population density is 63 persons per sq.km.

Out of a total of 150 communities, 143 are rural, representing 80 percent of the district population. Agriculture and forestry engage over 70 percent of the economically active population. Some 40,000 people out of the population (almost 44%) live within the extreme poverty bracket with a low annual household per capita expenditure of GH¢ 303 (Ghana Statistical Service, 2008). The region experiences food insecurity up to about five months each year (Quaye, 2008). The people crop maize, vegetables, soya beans and ground nuts in small holdings and supplemented by shea butter processing by the women. Adult literacy rate is low; four out of every five adults are illiterate, while more females (64.8 per cent) than males have completed primary school in the district (Ghana Resource Centre, 2010; Savelugu-Nanton District Assembly, 2010). There are 87 basic schools in the district and at the time of the field study, six schools were benefiting from the pilot phase of the GSFP.

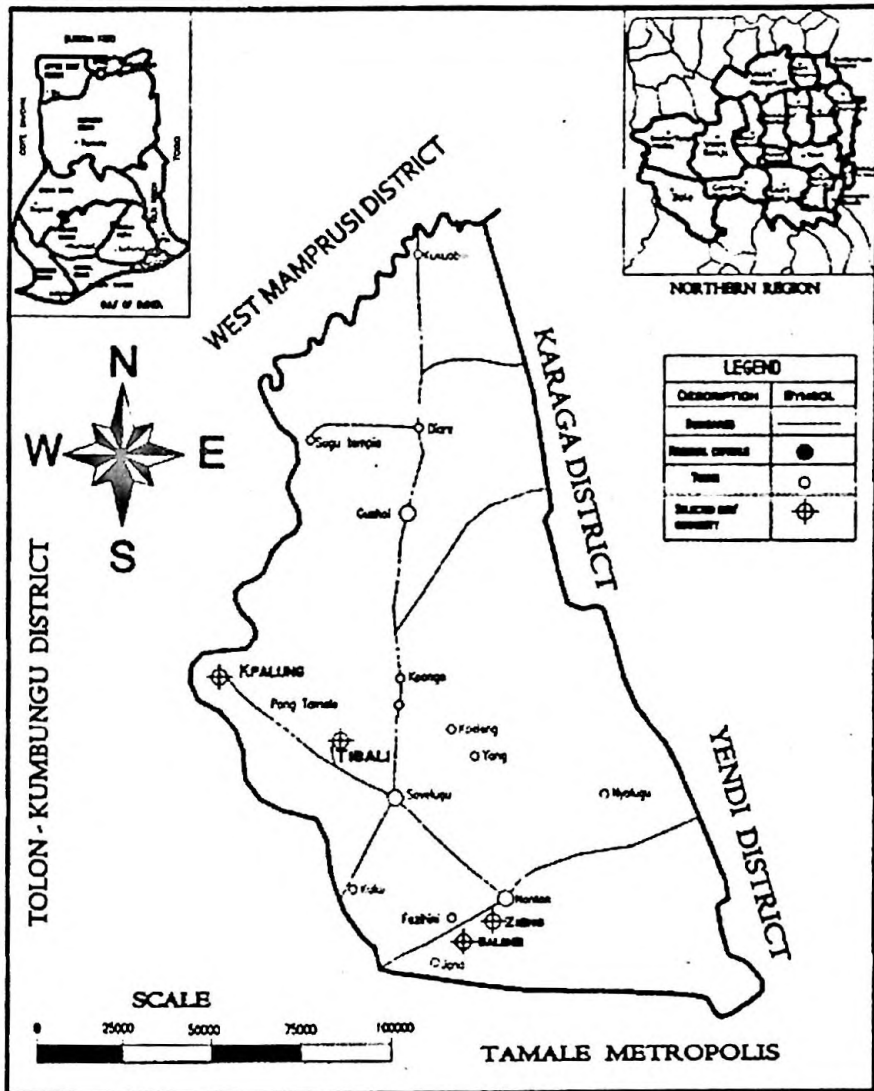


Figure 2: Map of the Savelugu-Nanton District
 Source: Savelugu-Nanton District Assembly (2009)

Information on the implementation processes required responses from personnel who had been on the programme since its inception; these were the focal persons from the collaborating ministries, departments, donor agencies, implementing institution and the beneficiary schools and community members. The assessment of the impacts relied on school data

on pupils. Only two schools had been on the programme since the piloting in the district and were selected by census and an equal number was sampled as control schools for valid and reliable statistical conclusion to be drawn. Sampling of schools and respondents was, therefore, by both probability and non-probability techniques (Devore, 2004; Sarantakos, 2005). Records of pupils enrolled from 2001/2002 to 2010/2011 academic years were used for the study.

The GSFP was piloted from the 2006/2007 to 2010/2011 academic years. The beneficiary schools selected were Tibali and Kpalung Primary Schools and Balshei and Ziang Primary Schools as control schools. Several methods such as content analysis of publications on the programme and the administration of survey instruments were used in data collection. Three sets of instruments were used to collect data to address the objectives of the study. The study required two sources of data to conclude on the processes of implementation of the GSFP and its effects on the beneficiary schools. Structured interview schedules were used to collect secondary data from pupil's class registers (enrolment and attendance records) as data for the analysis of the effect of the GSFP on basic education between 2000/2001 and 2010/2011. Secondly, interview guides that were served on focal persons from ministries and departments, donor agencies and implementing institution provided the primary data for the study. The third instrument, a focus group interview guide, was used for the two Focus Group Discussions in the two beneficiary communities to obtain views of the community members on their participation in the implementation process for the programme.

The study sample consisted of four schools and 53 respondents which involved four focal persons one each from the key stakeholders; Ministry of Local Government and Rural Development, Department of Food and Agriculture, Ghana Education Service and the District Assembly. Four others included the regional coordinator of the GSFP and three officials from the GSFP national secretariat. A respondent each was selected from the donor agencies; ADRA, CRS and the Dutch Embassy. Beneficiary community members selected for the FGD comprised of 15 parents who were farmers or traders, a food committee member and a cook from each community. The respondents for each of the four selected schools; the school heads and their assistants enabled access to pupils' data.

Data were processed and analysed in order to draw conclusions on the effectiveness of the implementation process. Survey data gathered from content analysis of publications and interviews was analysed qualitatively. Enrolment and average attendance per pupil per term were first compared between beneficiary and control schools and secondly over the study years

using ANOVA statistical technique from MS Excel software as described by Bluman (1998) and Lucey (2002). School drop-out data were compared nominally.

Results and discussion

This section analyses and discusses empirical findings from the field. It is divided into two; discussions on the implementation processes and effects of the programme on school attainments. The discussions under the implementation process are considered under six main items; institutional structure, collaboration and participation, staffing, funding, school and community selection criteria and then monitoring and evaluation to cover the first objective. School attainments; enrolment, attendance and drop-out data were analysed statistically for changes in line with the second objective.

Ghana School Feeding Programme implementation process

The implementation theory states that the implementation of a policy must be based on a statute (Hargrove, 1981). Field data from officials interviewed indicated that the implementation of the GSFP was a Presidential Special Initiative based on a project manual; the District Operations Manual. A review of the manual revealed details of the structures to be established, their responsibilities, target groups and policy outcomes. All nine stakeholders interviewed confirmed the manual as the policy document.

Institutional structure

According to Ryan (1996), effective implementation of a policy depends on the extent to which implementing structures support the achievement of objectives. The apex body, PSC, established the National Secretariat. Under its mandate the National Secretariat also established the regional secretariat and the implementation committees at the district and beneficiary school.

The District Implementation Committee is made up of departmental heads referred to as Desk officers or District Focal Persons who serve as representatives of the collaborating ministries at the district level. It is chaired by the District Chief Executive. The study found during the field interviews that all the structures shown in Figure 2 were established in line with the policy guidelines.

Collaboration and participation

A review of the Annual Operating Plan (Government of Ghana, 2009) provided details of collaborative efforts of the National Secretariat for 2009.

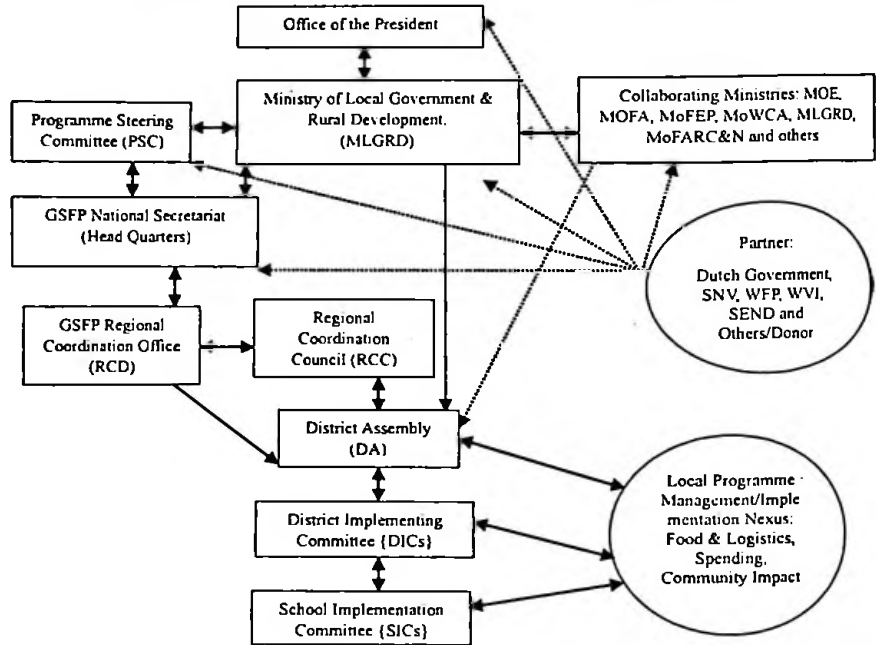


Figure 2: Organogram of the GSFP
 Source: Government of Ghana (2007)

For example, there was collaboration between the national secretariat, MLGRD and the Audit Recommendations Implementation Committee (ARIC) on execution of the nine-point recommendations from the Dutch Government that developed and operationalised the social accountability project. Another collaborative effort saw the successful 'October Fair' held in Tamale to sensitize the public in the northern regions.

However, the three district focal persons interviewed claimed the level of collaboration and participation among DIC members was ineffective adding that meetings were irregular. The GES desk officer expressed dissatisfaction over the inactive involvement of the School Health and Education Programme Coordinator to inspect school health and menu. It was observed that though the GES made inputs in the selection of schools, 'menu development and the engagement of caterers, the office of the DCE took responsibility for the final decision from the DIC. From the focus group discussions it was observed that community members were not being duly consulted as stakeholders.

Staffing

Competency, managerial and political skills and commitment to statutory goals of personnel engaged to manage the implementation of a policy are essential for a successful policy implementation (Hargrove, 1981). The field study identified three sets of personnel; those directly employed and paid by the GSFP National Secretariat, ministerial and departmental officials acting as desk officers and beneficiary community volunteers serving on school implementation committee.

The paid personnel included the Regional Coordinator, the monitors, the caterer and the cooks. Information obtained from the field study indicated that staff was engaged through successful interview by the Public Services Commission. This observation is also recorded in the Annual Operating Plan (Government of Ghana, 2010). However, a review of publication on the implementation of the policy showed evidence of management problems encountered. Agbey and Abu (2009, p. 4) reported that:

The entire management team had to go through orientation and staff that did not go through formal recruitment procedures had to go through the process before being issued with appointment letters. This is in contrast to the past scenario where most staff felt vulnerable to the National Coordinator because they were working without appointment letters. The CRS also stated: The people who were employed to manage the programme did not have enough experience in school feeding and that was why the entire programme failed. They needed extensive training before the commencement of the programme.

Press reports also revealed that there was a high attrition rate with three National Coordinators being dismissed between 2007 and 2010 for various forms of impropriety, irregularity and non-compliance with laid down procedures (GhanaWeb, 2009). The field study also revealed that after the 2008 elections, the new government changed all paid personnel leading to understaffing at the Regional Coordinator's office in Tamale.

Funding

Funding is required in an implementation process to cover financial obligations under the policy. The GSFP required adequate funding to pay for foodstuffs, staff emoluments and administrative costs. The field study identified that all programme funds were managed by the Ministry of Finance and Economic Planning (MFEP). The GSFP paid a feeding quota of Gh¢0.40 per beneficiary pupil. Details of financial disbursements were not available for the study area except for those reported in its AOP. The programme expenditure for 2010 was Gh¢61,604,845.16 (98.86% of total expenditure) covering *697,416 beneficiary pupils in 1,741 schools* (Government of Ghana, 2009).

At the two beneficiary schools, it was observed that the irregular and low payment to the cooks was not motivating enough for their continued engagement. The irregular disbursement of funds necessitated purchasing foodstuffs from farmers in the community on credit. It was gathered from the two focus group discussion sessions that the communities periodically supported the programme with firewood and water at their expense while children did kitchen chores against policy. The delayed payment is listed as a challenge to the operations of the programme in the AOP (Government of Ghana, 2009). Commenting on the view that there was the need for an upward adjustment of the quota, the Regional Coordinator disagreed with the discussants and suggested that caterers were inefficient adding that cooking for a large number of pupils at that rate the quota should be sufficient.

Schools and community selection criteria

In order to achieve policy objectives, Mazmanian and Sabatier (1983) stated that there must be compliance of target groups with policy outputs. One such policy output is the criteria for the selection of beneficiaries. The District Operating Manual (Government of Ghana, 2007) provided the criteria for the selection of beneficiary schools and required the DIC as its operational responsibility to ensure that schools selected meet the criteria for eligibility as indicated. It was observed from the study that the GES provided data on eligible schools to the office of the DCE where final decisions on beneficiaries were made. The basic schools at Tibali and Kpalung were two beneficiaries selected in 2006. The eventual mode of selection for beneficiaries was not apparent which demonstrated lack of transparency in the process.

Monitoring and evaluation

Implementation theory proposes revision of statutes. To remain relevant, policy decisions and outputs must be revised to take care of changes within the target population. The implementation process therefore, requires constant service evaluation to ensure that policy outputs are sustainable.

The manual provided formats for reporting to the GSFP National Secretariat by all structures and facilitating NGOs. Teachers in the beneficiary schools complied with the terms of the policy and sent returns to the regional secretariat. It was also found that the CRS had monitors operating alongside the programme officials as a contractual agreement on monitoring with the programme. The focus group discussants at the two communities confirmed that monitors came to the beneficiary schools to collect data on the performance of the programme in their communities.

School enrolment

The enrolment records of pupils in the beneficiary schools; Kpalung and Tibali Primary Schools were computed from school record books. Figure 3 shows the cumulative enrolment effect of the GSFP in the beneficiary schools. Tibali Primary School was enrolling an average of 20 pupils per annum before the intervention and this rose to 23 pupils at the end of the piloting period. Kpalung Primary School also increased enrolment from 32 to 49 pupils per annum.

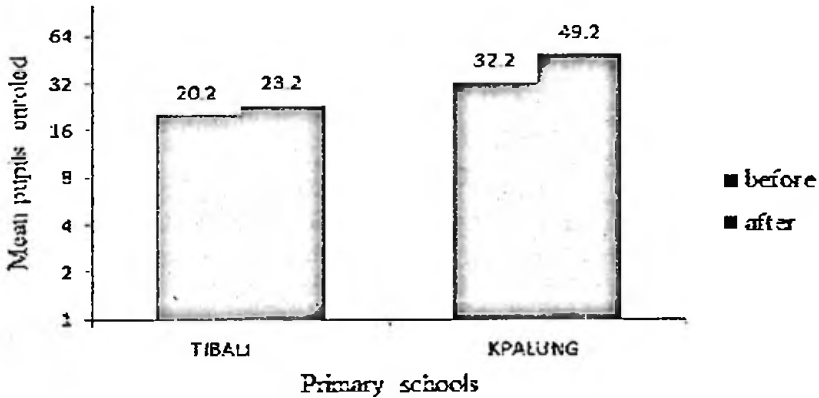


Figure 3: Enrolment in beneficiary schools

Source: Survey data (2011)

To determine if these differences are statistically significant, the null hypothesis that there was no relationship between the GSFP and school enrolment in the beneficiary schools was tested with ANOVA. The Average enrolment per year for the two schools shown in Table 2 was used for the analysis.

Table 2: Enrolment trend of beneficiary and control schools

Year	GSFP				Control school			
	Tibali P/S		Kpalung P/S		Balshei P/S		Zieng P/S	
	Enrolment	% change	Enrolment	% change	Enrolment	% change	Enrolment	% change
2001	26		22		22		19	
2002	17	-34.6	23	4.5	29	31.8	19	0
2003	20	-23.1	33	50	33	50	17	-10.5
2004	16	-38.5	32	45.4	29	31.8	19	0
2005	22	-15.4	51	131.8	25	13.6	16	-15.8
2006	26	0	69	213.6	23	0.6	22	15.8
2007	28	7.7	62	181.8	8	-63.6	18	-5.3
2008	21	-3.8	40	81.8	7	-68.2	20	5.3
2009	20	0	45	104.5	17	-22.7	19	0
2010	21	-3.8	30	36.4	18	-18.2	21	10.5

Source: Survey data (2011)

Table 2 shows the trend in enrolment during the five years before the intervention (before) and five years of the intervention. Comparing the enrolment data for 2001 to subsequent years, enrolment data at Tibali primary school showed a reduction by 34.6 percent during the following year. Improvement was only recorded for 2007. For Kpalung primary school, though the changes were not progressive, all enrolments were higher than the 2001 figure.

The result of the ANOVA test of the null hypothesis at 95% confidence level is shown in Tables 3. The test statistic F was 12.05 with 39 degree of freedom and a treatments (between schools) p-value is 0.001; this indicates that there is a significant difference between the schools. The p-value for blocks (along the years) was 0.61 indicating that there was no significant difference between the yearly enrolment figures. The null hypothesis is not rejected.

Table 3: Comparing enrolment in schools

School	Mean	Median	Mode
Tibali	21.7	21	26
Kpalung	40.7	36.5	-
Balshei	21.1	22.5	29
Zieng	18.3	18.3	18.3

df: 39; F: 12.05; Treatments p-value = 0.00; Blocks p-value = 0.61

Source: Survey data (2011)

To determine the differences between the schools, the post hoc analysis produced the results in Tables 4 and Table 1 in Appendix 1. Both results

show that Kpalung had significantly higher enrolment than the three other schools. The reasoning is that Kpalung, is a much bigger community and has a higher population which translates into having higher enrolment numbers. The results show that there is no evidence of an influence from the school feeding on enrolments.

Table 4: Comparison of differences in enrolment between schools

School	Zieng	Balshei	Tibali	Kpalung
Zieng				
Balshei	0.65			
Tibali	0.79	0.14		
Kpalung	5.22	4.57	4.43	

Critical values for experimentwise error rate: at 5% = 2.74, 1% = 3.43

Source: Survey data (2011)

Table 5: Pupils' average attendance per term

Year	Term	Tibali P/S		Kpalung P/S		Balshei P/S		Zieng P/S	
		class size	Attendance	class size	Attendance	class size	Attendance	class size	Attendance
2005	1	22	57.86	33	46.15	25	57.28	16	49.79
	2	22	54.09	33	40.69	25	58	16	51.21
	3	22	59.45	33	45.81	25	57.64	16	51.21
2006	1	28	50.28	51	44.54	23	61.58	22	51.68
	2	28	50.03	51	45.8	23	60.78	22	50.04
	3	28	50.6	51	42.47	23	63	22	46.05
2007	1	26	55.61	51	42.54	14	60.57	19	52.67
	2	26	52.8	51	46.8	14	58.71	19	51.2
	3	26	54.19	51	39.17	14	61.92	19	47.65
2008	1	26	56.26	46	37.41	10	44.5	20	53.64
	2	26	53.76	46	49.95	10	59.4	20	48.38
	3	26	55.07	46	40.52	10	59.6	20	45.16
2009	1	25	54.92	46	52.78	10	53.1	19	50.26
	2	25	53.32	46	54.3	10	54.1	19	56.78
	3	25	57.76	46	56.08	10	59.3	19	55.6
2010	1	24	46.62	45	56.17	11	53.81	21	50.14
	2	24	49.29	45	59.08	11	56.63	21	50.52

Source: Survey data (2011)

Attendance

The data for 2005 before the piloting of the programme was used as the baseline data. Table 5 is based on the average pupil attendance per term for the selected academic years and class sizes for both beneficiary and control schools. The null hypothesis that the GSFP has produced no significant difference in school attendance in the beneficiary district was tested using ANOVA. The test results are shown in Table 6.

At five per cent confidence level, the test statistic F was 5.32 with 3 degree of freedom, the p-value was 0.010 for the test between schools (treatments). This indicates a significant difference between schools. However, the test for differences along the years of the programme (blocks), the p-value obtained was 0.772; this is larger than the estimated 0.05 indicating that there was no significant difference between years in average attendance. The null hypothesis is accepted: the intervention produced no significant difference in attendance in the beneficiary schools. The post hoc analysis results (pairwise tests) in Table 2 in Appendix 1 produced three areas of differences. Kpalung had significantly higher attendance than Balshei (p-value = 0.001) only at 1% alpha level but had significantly higher attendance than Tibali (p-value = 0.03) at 5% alpha level. Balshei had a significantly higher attendance than Zieng (p-value = 0.02) at 5% alpha level. The higher improvement at Kpalung over Tibali primary school observed is attributed to differences in community size; Kpalung community is larger than Tibali and therefore a higher pupil numbers.

Table 6: Comparison of pupils' average attendance

School	Mean	n	Std Dev.
Tibali	53.24	6	3.62
Kpalung	47.16	6	7.00
Balshei	57.47	6	2.99
Zieng	50.63	6	1.87
Year			
2005	52.34	4	6.28
2006	50.53	4	8.57
2007	51.98	4	7.34
2008	50.39	4	5.62
2009	54.85	4	0.65
2010	52.65	4	4.60
Total	52.13	24	5.57

Treatment statistics: df: 3; F: 5.32; p-value = 0.010

Blocks statistics: df: 5; F: 0.50; p-value = 0.772

Source: Survey data (2011)

Table 7: Comparison of attendance between schools

School	Kpalung	Zieng	Tibali	Balshei
Kpalung				
Zieng	1.30			
Tibali	2.28	0.98		
Balshei	3.87	2.56	1.59	

Critical values for experimentwise error rate: at 5% = 2.88; 1% = 3.71

Source: Survey data (2011)

School drop-out

The school drop-out data is shown in Table 8. It was observed from the comparison of class lists that some pupils occasionally absented themselves from school for long periods within and across school terms. Such long absenteeism was more prevalent at the Tibali P/S. They were therefore discounted from the drop-out data.

Table 8: Drop-out from school

Year	GSFP schools		Control schools	
	Tibali P/S	Kpalung P/S	Balshei P/S	Zieng P/S
2006	6	18	-	-
2007	2	0	9	3
2008	0	5	4	0
2009	1	0	0	1
2010	1	1	0	0

Source: Survey data, 2011

The number of drop-outs reduced significantly a year after the inception of the programme and remained low to the end of the piloting period. The increase to five in 2008 for Kpalung was explained by school heads to be due to pupils relocating with parents. The low drop-out numbers were also observed in the control schools. The failure to achieve significant improvement in school attendance could be associated with the ineffective implementation process or other socio-cultural factors like general attitude of the people to education, school environment, religious culture, farming and family systems which could not be altered by the provision of free school meals.

Conclusions and policy implications

Based on the main findings from the study, it can be concluded that the processes of implementation of the GSFP as a Presidential Special Initiative under the MLGRD was not fully effective. Although the institutional setup was established in line with the policy guidelines, the agencies did not fully comply with policy decisions. The DIC failed to foster collaboration and

participation among major stakeholders in the study area; the selection criteria for beneficiaries of the programme were not fully complied with. Staff engaged was both inadequate and lacked school feeding experiences. Staff competencies were compromised with by political patronage. The funding for the programme was irregular and inadequate which resulted in the feeding programme being irregular. The programme therefore, failed to influence an improvement in enrolment and attendance as school attainments though drop-out numbers reduced in all schools over the period selected for the study.

Based on these conclusions, the following recommendations are made to help review the GSFP as a policy and its operations generally and in the study area. The institutional arrangement under the policy would be made more effective if the entire programme were removed from the office of the President as a Presidential Special Initiative by government. The policy must be redesigned with stakeholders' participation into a statute through Parliament and given funding from the consolidated fund. This will ensure regular financing for an uninterrupted feeding of beneficiary pupils. As a statute, this would reduce the influence of political patronage, ensure continuity in school feeding management, improve staffing and ensure the building of staff competencies. Further, the new statute must enable the targeting of the actual beneficiaries based on numeric criteria for beneficiary selection to reduce the levels of discretionary powers exercised by implementers. The new statute must direct the DIC to ensure active participation of SHEP to facilitate and secure the provision of good food and feeding condition for pupils. An efficient and effective school feeding programme well resourced should produce the desired effect of promoting enrolment, attendance and drop-out in the study area and in all GSFP beneficiary areas.

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