

A critical evaluation of the school feeding programme in rural schools: a case of st pauls secondary school kapiri mposh, Zambia

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Abstract

According to the World Bank statistics, it is estimated that more than 60 million children go to school hungry every day and about 40% of them are in Africa. Hunger and poverty do not only affect the children's developmental and health growth but it also impacts negatively on the quality of learning achievement coupled with poor school attendance. Although several interventional measures have over the years been put in place to mitigate the impact of hunger on the learning achievement and school attendance, the scourge has however continued. The school through its management in collaboration with pupils, parents, local authorities and the community realised that the School Feeding Programme (SFP) is one of the effective social safety net and helps boost school attendance, cognition and educational achievement. Research findings both from the Least Developed Countries (LDC) and the Developed Countries (DC) have shown that targeted school feeding reaches the most vulnerable children, especially girls, helping to reduce their hunger and keep them in school.

The study was therefore, conducted to evaluate the effectiveness, efficiency, relevance, impact and sustainability of the school feeding programme. The findings revealed that the programme was effective, efficient and sustainable because it was inclusive in nature. That is it involved the pupils themselves, parents, local authorities and the surrounding communities. In light of the findings of the evaluation study, the following recommendations among others were advance: 1. The school should explore further avenues to promote the active involvement of parents, communities and local authorities in the development and implementation of school feeding programme. 2. The school and other stake holders should advocate for the government to put in place a regulatory framework in order to govern the design, development and implementation of the SFP. 3. The school through PTA should apply a multi-disciplinary and multi-stakeholder holistic approach to support effective school feeding programmes and policies at national and local level. The school should further enhance its agricultural activities and school garden as an integral part of the school feeding programme.

Keywords: Hunger, Poverty, Learning Achievement, School Feeding Programme

Introduction

Background of the Study

Zambia is one of the many African countries that is still rated Least Developed Country (LDC) despite it attaining a middle income status. In this regard, successive governments have been working very hard to develop the nation. One of the vehicles that the Zambian government has identified as an effective and efficient tool of development is education. In fact one of the Millennium Development Goals (MDGs) that Zambia has committed itself to attain by 2015 is the attainment of Universal primary or basic education which is a right to every Zambian. However, Zambia just like other Least Developed Countries face huge challenges to provide quality education to its citizens mainly due to high poverty levels, and mega resources to mention but a few. Nevertheless, among the many interventions the Zambian government has put in place so that all school going children attain quality education is the introduction of the School Feeding Programme (SFP).

UNESCO (2010: 12) ^[15] asserts that "it's hard to think about but, the reality is, millions of children around the world commonly go to school on an empty stomach. Beyond the common result of chronic low-level malnutrition, this makes it difficult for them to concentrate on their lessons or participate

in activities". This is true in that some countries like Zambia, during severe food shortages, children are pulled out of school so they can spend their days looking for food or doing piecework so that they can earn money to buy food. By the end of the school year, their absences generally result in poor performance and failing grades. The Zambian government therefore planned to widen its School Feeding Programme. The Ministry of Education (MOE) (2013)^[11] revealed that the existing GRZ School Feeding Programme has so far provided food for a paltry 800,000 school children across the country, over the last 10 years against an estimated 3.1 million vulnerable school children annually that need to be on the programme.

It can be argued that expanding the SFP therefore has clear benefits. However, it is being done without any regulatory framework. That is, there are no defined applicable standards, both in terms of food and its calorific value (FNDP, 2006).^[5] It is imperative that a new regulatory framework should seek to define how much a child needed, the times the food should be provided, and determine whether the programme should be the responsibility of the Ministry of Agriculture or Ministry of Education or indeed be jointly run by the two ministries or completely separate entities.

The above ambiguity and statistics clearly point to the fact that government alone cannot effectively and efficiently implement the SFP hence the need for the active participation of grant-aided institutions, private sector, NGOs and all other stake holders. St Pauls Secondary School is one of the mission schools that have risen to the challenge of implementing the SFP using its own resources. The school is located in the rural area which is 33 km from Kabwe town. It is managed by the Marist Brothers whose main passion is to offer community service and in particular boys' education. The school was built to mainly provide holistic education to the local community and it has been in existence now for more than 50 years. The institution has two categories of pupils namely the boarders and day scholars.

Currently, the school enrolls over 620 pupils of which 21% are day pupils who come from the local community surrounding the school. Out of the 130 day pupils, only 49 are girls representing 38% of the total number of day students. The school has over the years discovered that day scholars were not performing academically, socially and spiritually as well as those in the boarding. It is for this reason that its SFP only targets the day pupils because they come from families who are not able to provide adequate and nutritional meals to their children. Furthermore, providing good education is not simply about building classrooms, it also requires a broader effort that includes tackling teacher shortages, building rural roads, increasing incentives for school attendance, and putting in deliberate measures to increase rural incomes in order to make the SFP sustainable. The report therefore, seeks to present the results of an evaluation study of the performance of the School Feeding Programme (SFP) on the day pupils' school attendance and learning improvement of St Pauls Secondary School in Kapiri-Mposhi District of Central Province, Zambia.

Programme Description

The study mainly applied itself to the reasons why the SFP was introduced, what it meant to accomplish and whether the set objectives were effectively, efficiently and sustainably fulfilled in the period under review.

Why School Feeding Programme

School feeding programmes have been implemented both in developed and the developing world. Throughout the developing world, these programmes often occur through large organizations in collaboration with national governments and non-governmental organizations (Bennett, 2003).^[1] The largest provider is the UN World Food Programme (WFP), which operated in 78 countries in 2006 (WFP, 2008).^[16] Numerous other agencies and NGOs operate school feeding programmes at the national, regional and local level. Moreover, the school feeding programmes use many different modalities to provide food to schoolchildren. There are also complementary actions that, at marginal cost and implemented as part of the programme, can add to the effectiveness of school feeding programmes. In addition, there are important larger contexts that affect the efficiency and outcomes of school feeding and should be included in the overall planning process.

The primary assumption of SFPs is that education and learning depend on good nutrition. Ample evidence exists to support this assumption. However, in designing and implementing a school feeding programme, a number of options are available,

depending on the primary and secondary objectives of the programme. SFPs can range from simple snack provision (usually fortified biscuits) to breakfast or lunch programmes, to take-home rations. Often, these programmes operate in conjunction with other health and nutrition initiatives to increase their success and impact (CRS, 2001)^[3]. Kent (2007: 2)^[7] argues that the main purpose of SFP is to among others "increase enrolment and attendance and/or decrease gender disparity, alleviate short-term hunger, thereby increasing learning capacity, improve nutritional status, thereby increasing learning capacity and improve micronutrient status". Therefore, successful implementation of SFP should help Zambia attain Millennium Development Goals numbers 1 and 2 which are meant to eradicating extreme poverty and hunger and achieving universal primary education. Notably, the MDGs have subsequently been replaced by Sustainable Development Goals (SDGs). It should also help Zambia become a prosperous middle income country by 2030 in line with the country's vision 2030.

Objectives of School Feeding Programme

Three objectives are commonly associated with school feeding programmes (SFPs):

- To increase school enrolment and attendance among school-age children;
- To improve the nutritional status of children in school; and
- To improve the cognitive or academic performance of the children.

Therefore, this study examined and assessed empirical evidence regarding the hypothesized relationships among SFPs, school attendance, enrolment, cognitive development, and academic performance. It also uses research findings to derive SFP design recommendations. Finally, the study proposed an agenda for a needed operations research project on how SFPs influence school attendance, enrolment and academic performance.

SFP impact on Enrolment and School Attendance

There is much evidence to suggest that school feeding programmes increase enrolment and attendance in school, particularly amongst girls (McGregor, 2005).^[10] Food can act as a strong incentive for children to attend school on a regular basis. Girls especially benefit from this, as parents may feel there are sufficient income-transfer benefits (meaning the meal/food provided acts as a form of income savings/benefit as they do not have to spend as much on food). However, there other factors that impacts negatively on the attendance and learning achievement as girls are often not encouraged attending school due to cultural practices, beliefs about education and they are needed to provide valuable labour and contribute to the household. Nevertheless, in designing a school feeding programme, caution is needed to ensure that the food/meal is additive rather than subtractive. If the family subtracts previously provided food from the child's diet due to the provision of food in school, many of the benefits of the provision would be lost (WHO, 1999)^[17].

Impact of SFP on Alleviating Short-Term Hunger

The evidence that school feeding programmes alleviate short-term hunger is very strong (CRS, 2001).^[3] Much research has also been conducted on the effects of short-term hunger

related to learning capacity. When a child is hungry due to skipped meals or much activity, their ability to learn is dramatically decreased. In many cultures, breakfast is not provided. This means the child may not have eaten since the evening before. That combined with long travel times, may mean the child begins school hungry and unable to concentrate. The provision of even a small snack at the start of the day or mid-morning alleviates the short-term hunger and has been linked to increased awareness, activity and learning capacity (Peralta, Michael and Joseph, 2008) ^[13].

Impact of SFP on Nutritional Status

Tomlinson (2007) ^[14] observes that the evidence that school-feeding programmes can improve nutritional status in the long-term is inconclusive and weak. The physical growth of children is a result of a number of interconnected variables, especially in areas where poverty is endemic. Environmental factors, genetics, food consumption patterns, health and illness, hygiene practices, lack of sanitation and the onset of puberty are but a few (McGregor, 2005).^[10] Data collection on these variables has been inconsistent. In addition, it is believed that potential for catch-up growth among stunted children is limited after 2 years of age, particularly in poor environments. However, some research indicates that undernourished children do benefit from school feeding programmes (Tomlinson, 2007) ^[14].

Impact of SFP on Micronutrient Status

While the evidence related to improvements in overall nutritional status is weak, there is good evidence to suggest that school feeding programmes, when designed with micronutrients in mind, can greatly improve micronutrient status. This is often referred to as 'hidden hunger' as the effects are not always visible. The three main micronutrients that SFPs can impact are iron, Vitamin A and iodine. All the three have been linked to learning capacity.

Theoretical and Conceptual Framework

The theoretical and conceptual framework of this evaluation report centres on two main schools of theories. The first one argues that the School Feeding Programme (SFP) helps improve pupil's school attendance, cognitive development and learning achievement among many others. For example, Mann (1926) ^[9] conducted nine trials in his sample revealed that school feeding corrects overt nutritional deficiencies, which in turn improves brain growth and performance. Such trials assumed that food supplements should be rich in energy, protein, and vitamins and continued for a period before their effect can be shown.

The trials further pointed out that despite providing children with a healthy, nutritious meal at school, the school feeding programme also does much more such as enabling pupils to have full bellies and full minds. In this regard, pupils will no longer have to worry about where their next meal would come from thereby making students concentrate on their studies instead of on their hungry stomachs. As already alluded, the school attendance is boosted. It is argued that not only does the school feeding programme improve students' overall health and nutrition, but it also encourages families to send their children to school. The results are that school enrolment, attendance and completion rates will significantly improve.

Additionally, SFP brings about status update. It is an opportunity for teachers and staff to monitor students' nutritional status. If a child is showing signs of malnutrition, more action can be taken. Further, as for the girls the school feeding programmes have a particular benefit to girls, who are often the last to be fed in a family and are not provided with the same opportunity to attend school. At some schools, girls are provided with an additional take-home ration of food if they attend school consistently every month, and for regular one-year attendance, girls will be given enough grain for their entire families.

Suffice to note that institutions of learning where SFP is promoted, they usually have school gardens which are often planted as part of school feeding programmes. Not only do the fruits and vegetables grown supplement the children's diets, they also provide a learning opportunity on growing food that the children can share with their parents. In other words, the SFP has several benefits such as pupils feel valued and looked after, short term hunger relief, reduced absenteeism, improved school diet which in turn inspires home diet and of course improved literacy that would eventually bring about significant reduction in intergenerational cycle of poverty.

The other side of the coin is that SFP do not help pupils improve their school attendance, cognitive development and learning due to several factors. The commonest reason for failure was that the programme was built around a misguided theory such as correcting a nutritional deficiency that did not exist. Studies that piloted different supplements until they identified one that was readily consumed or that let children choose from menu were, in general, more likely to improve growth (Paige, Cordano and Huang: 1976) ^[12]. Furthermore, studies conducted by Jacoby, Cueto and Pollitt (1996) ^[6] indicated that very poor children rarely reject food in any form, and the supplement generally had a significant effect.

In a nutshell, systematic reviews rarely give detailed information on the context, mechanisms and outcomes of interventions and the theories that underpin them (Kristjansson, Robinson, Petticrew, Macdonald, Krasevec and Janzen: 2007) ^[8]. Nevertheless, the school feeding programme should be aimed at children with documented nutritional deficiencies. In addition, SFP will be more likely to be effective when designed in partnership with the local community and interventions are piloted. However, in situations of absolute poverty even severely malnourished children may not benefit from school feeding programmes because they may receive less food at home.

Evaluation Study Justification

Despite numerous academic, social, physical and spiritual benefits that school children can obtain from SFP, the programme is not void of challenges and setbacks that may need both proactive and reactive interventions from government, private sector and other stakeholders. Some of the challenges and setbacks of the SFP include but not limited to the following:

- The SFP is being done without an effective and efficient regulatory framework.
- There are no defined applicable standards, both in terms of food and its caloric value.
- The SFP is sometimes built around a misguided theory such as correcting a nutritional deficiency that did not

exist in some school children (one size fits them all approach).

- Lack of sustainable source of funding or financing
- Donor dependence syndrome.
- Uncertainties on the future and long-term sustainability of SFP especially in Least Developed Countries like Zambia
- Lack of monitoring and evaluating mechanisms on the effectiveness and efficiency of SFP.

It is against this background that an evaluation was necessitated. Further data was collected from both primary and secondary sources thereby enabling the study outcome attaining high levels of validity and reliability.

Research Methodology

The study adopted a combination of qualitative and quantitative research paradigms.

Study Design

The design that was used is the non-experimental design (i.e. case study design) because the evaluation was undertaken in uncontrolled natural setting. The evaluation study was conducted on the selected day school pupils of St Pauls Secondary School as they were the beneficiaries of the School Feeding Programme. There was no manipulation of any variable and no administering of any kind of stimulus or intervention on subjects.

Target Population

The population that was targeted in this evaluation study comprised day school pupils of St Pauls Secondary School from Kapiri Mposhi District. The total target was 260 school pupils who are the beneficiaries of SFP. But due to time factor and resources, a sample was therefore necessary.

Sample Size

The evaluation study was undertaken to get 50% of the total target population of 260 day school pupils. Therefore, the total sample of the study was one hundred and thirty (130) day pupils who are the beneficiaries of SFP.

The Sampling Procedure

The study used both random and purposive sampling techniques to select the respondents. The random sampling was used to select 130 day school pupils because it provided of them chance to be chosen as a sample. On the other hand, purposive sampling was appropriate for selecting day school pupils who are the beneficiaries of the SFP because they were the rightful respondents relevant to the evaluation study.

Data Collection Techniques and Instruments

The research instruments that were used in the study for data collection were the self-administered questionnaires and scheduled interviews for the day school pupils who benefit from the SFP.

Data Processing and Analysis

In the study, data was analysed using quantitative and qualitative methods. Qualitative data was sorted out by creating categories and checking for uniformity and consistency as collected from respondents as well as counting the number of responses from the respondents. Besides, quantitative data was analyzed using the Computer based

programme: the Statistical Package for Social Sciences (SPSS) Version 20.0. This helped to obtain graphs, tables, charts, percentages and make curves (skews).

Limitations

The evaluation process encountered the following limitations:

- The assessment was conducted during the same period when the pupils were also engaged in writing regional mock examinations. This made it difficult to find time to interview and administer questionnaires to the target day pupils.
- The evaluation was time consuming. Nevertheless, research assistants and guidance teachers helped to verify all the answered questionnaires and interviews with the school records as a way of enhancing reliability and validity of the information gathered from the respondents.
- Some pupils had difficulties understanding the questionnaire. However, they were assisted by interpreting in their local language where possible

Research Findings

The evaluation took into consideration the socio-demographic information because of its relevance to the study.

Respondents by mode of schooling

The respondents were asked to state their mode of school and the responses were as follows.

Table 1: Responses on mode of schooling

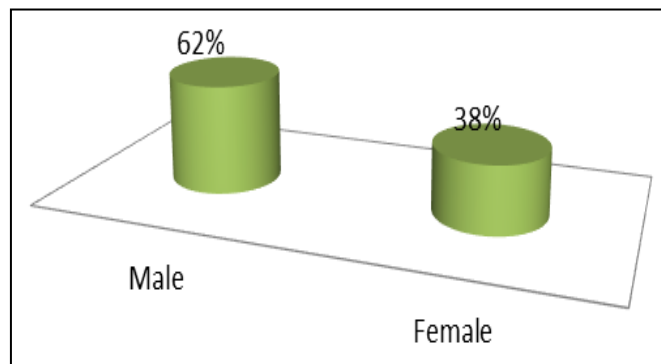
Responses	Frequency	Percentage
Boarders	490	79%
Day Pupils	130	21%
Total	620	100%

Source: Field Data 2017

The table above indicate that boarders (79%) are more than day pupils (21%). This could mainly be attributed to the nature of the school of being a boys boarding institution. It is also clear that almost all the day pupils come from the local communities whose cultural beliefs and norms may not encourage their children especially girls to excel in education.

Day Pupils by gender

The day pupils who are also the beneficiaries of SFP were requested to indicate their gender and the results are shown in the figure below.



Source: Field Data 2017

Fig 1: Gender

The bio-graphical information above indicates that 62% of the day pupils who benefit from the School Feeding Programme are boys while 38% are girls. There are many reasons for this disparity although early pregnancies and cultural teachings post a bigger percentage alongside lack of adequate and nutritious food.

School attendance by day pupils before and after the introduction of SFP

The data was sought from the school authorities, class teachers and class registers as regards the rate of attendance of day pupils before and after the SFP was introduced. The outcome is as shown below:

Table 2: School Attendance Before and After SFP

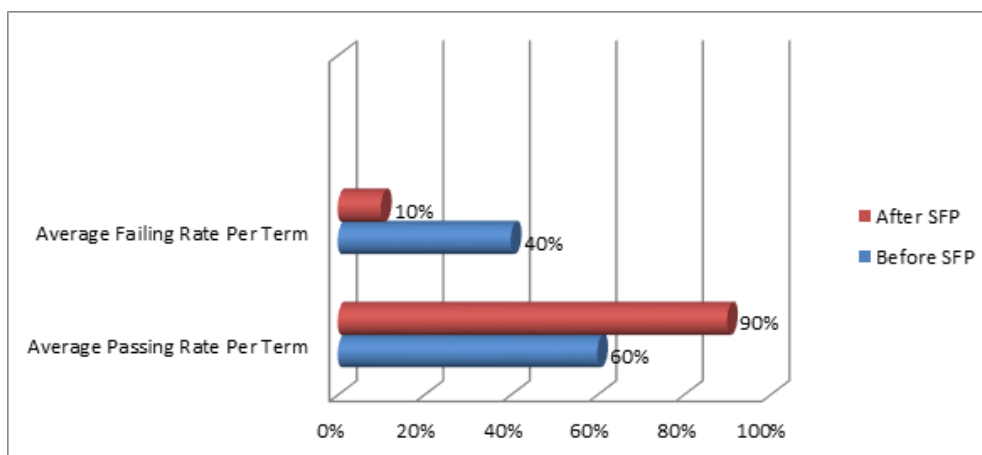
	Before SFP		After SFP	
Days attended per term	50	80%	61	94%
Days absent per term	15	20%	4	6%
Total	65	100%	65	100%

Source: Field Data 2017

The table above indicates a remarkable progress in school attendance by day pupils from 80% before the introduction of SFP to 94% after the programme was implemented. On the other hand, the number of day pupils was absent reduced from 15 to 4 before and after the SFP respectively.

Academic Achievement Before and After SFP

Another evaluation and assessment tool that was used to ascertain the effectiveness and efficiency of the School Feeding Programme at St Pauls Secondary School was the use of end of term results records. The assessment results were as shown in the figure below:



Source: Field Data 2017

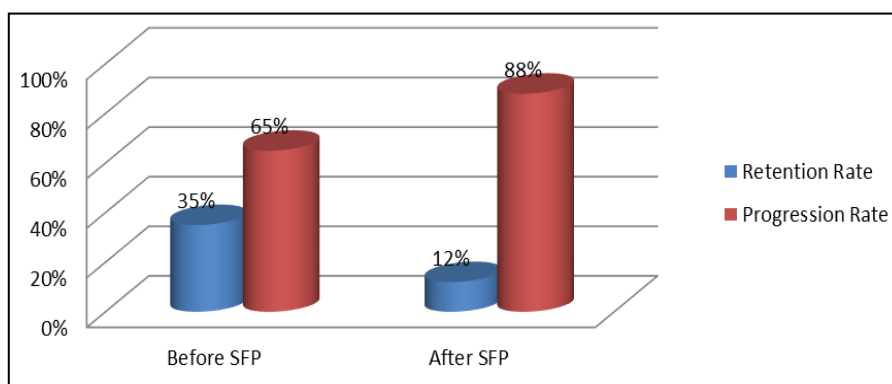
Fig 2: Average Academic Achievement Per Term

The academic performance of most day pupils showed an upward progression after the introduction of SFP from 60% to 90% as an average passing rate. On the other hand, there is a remarkable decrease in the failing rate i.e. from 40% to as low as 10%.

where pupils who do not perform well academically are not allowed to progress into the next grade of study. They remain in that particular grade until they satisfy the set conditions of passing in almost all the subjects allocated. It was felt that the introduction of SFP would go a long way in addressing this problem. According to the data gathered during the evaluation study, the retention rate of day pupils before and after SFP is shown below:

Retention rate of day pupils before and after SFP

St Pauls Secondary School has in place a retention policy



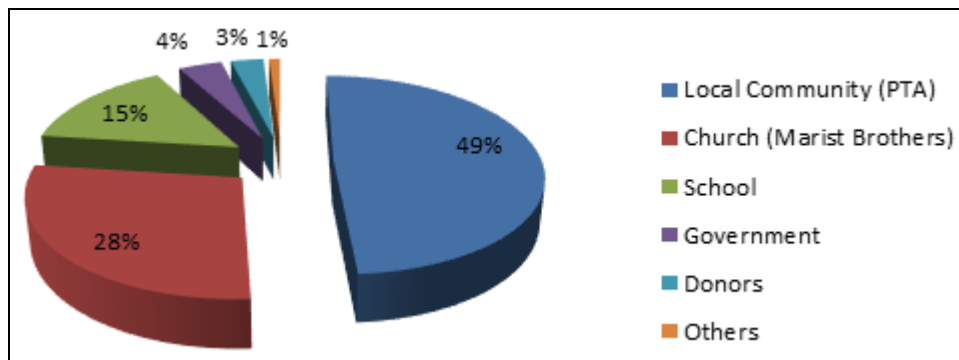
Source: Field Data 2017

Fig 3: Retention and Progression Rate Before and After SFP

The figure above shows that 45 day pupils out of the total 130 were retained before SFP was introduced representing 35% retention rate. After the programme was implemented, the retention rate decreased to as low as 12% which accounted for only 15 day pupils who did not proceed to the next grade. It is also evident that after the introduction of SFP, the progression rate increased from 65% to 88% respectively.

Sources of Funding for the SFP

The sustainability of any project is to a larger extent dependent on the source of funding. It was imperative therefore in this evaluation study to establish the sources of financing and the outcome were as follows:



Source: Field Data 2017

Fig 4: source of funding for the SFP

The data above shows that the School Feeding Programme and its financing were mainly driven by the community itself. This is so because, the PTA, church and the school which account for 49%, 28% and 15% respectively make up part of the community. Other sources of funding include government (4%), donors (3%) and others (1%). This makes the programme more sustainable because there is a sense of ownership by the local community.

Implications and reflection of research findings

The findings were further analyzed using the five principles of evaluation namely effectiveness, efficiency, relevance, impact and sustainability. Below are the key implications and reflections on the SFP objectives, design, development, implementation and performance at St Pauls Secondary School during the period of evaluation.

Effectiveness

- The study was satisfied with the effectiveness of the SFP at St Pauls Secondary School in that the school management and the committee tasked to spear head the programme designed, developed, implemented and made the programme to part of the overall plan of improving the education and social safety nets.
- Further, the programme was effective because it targeted the most underserved day pupils who come from food insecure areas and vulnerable families whose children exhibits relatively low rates of school attendance.
- While the effectiveness of the SFP can mainly be attributed to the fact that the programme is designed, developed and implemented with the full participation of the pupils themselves, parents, teachers and local stake holders, there is however need for regional coverage of the SFP by government in order to avoid children transferring to schools as a result of the school feeding.

Efficiency

- The evaluation of the SFP brought to light that the programme was efficient because it was integrated in the already school existing structures. For example, since St Pauls is a boarding secondary school, it has the kitchen, dining hall and already trained staff such as the cooks. So as they prepare the meals for the borders, they also include the shares for the day pupils who are on school feeding programme.
- In fact, the day pupils on the school feeding programme are not fed in isolation but they are made to eat together with borders. This encourages not only the core business of the programme of providing balanced meals to the pupils, but also promotes interaction among pupils which makes the SFP more efficient.
- The school has also design food-for-education programmes coupled with the deliberate policy of encouraging the local community to be supplying the school with the locally produced grains and other farming products rich in nutrients as a way of empowering the locals and at the same time making the programme sustainable and cost effective.

Relevance

- The relevance of the programme is anchored on the fact that the SFP was effective in raising learning and nutrition outcomes among pupils. Further, the relevance of the programme cannot be emphasised in that the SFP is a critical intervention that helps address the learning needs of the poorest, most marginalized children and the girl child.

Impact

- Access to universal primary school education has been a key policy priority for many nations trying to meet the millennium development goals (MDGs). However, learning outcomes of students in sub-Saharan African of which Zambia is not an exception, particularly those in rural areas, remain disappointing. Hunger, malnutrition

and chronic fatigue are huge hurdles to learning in sub-Saharan Africa. One proposed intervention is the implementation of school feeding programmes which has a significant impact on learning outcomes in the areas of reasoning, memory, comprehension and knowledge.

- The evaluation study sampled 130 pupils who had no access to SFP. Afterwards, the SFP was administered and over the course of one academic year, pupils showed great improvement in school attendance and learning outcomes. The results showed that the feeding programme contributed to the cognitive development of the pupils and produced positive outcomes that were pronounced in most academic subjects.
- Additionally, the school feeding programme had a significant impact on grade repetition. As already alluded earlier that St Pauls has the retention policy where pupils who do not perform satisfactorily are made to repeat the grade of which day pupils who come from hunger stricken families are worst victims. After the successful implementation of the SFP, the number day pupils who were made to repeat the grade significantly reduced a sign that the programme had a positive impact on the academic progression of pupils.

Sustainability

- The programme was sustainable because there is a heavy involvement of the community such as the church, parents, the school, local authorities and the pupils themselves. It is argued that sustainability can most readily be assured by working through communities, as governments simply do not have the financial resources to sustain school feeding programmes after donor support is withdrawn, and very few governments are committed to school feeding programmes over the long term.
- Working through communities, that is, getting the community involved from the beginning, and giving them ownership of school feeding programmes greatly increased the chances for the programme's success and sustainability. Parents saw the need for feeding their children and rendered help in various forms such as labour. Communities as well assisted in the planning of the programme as well as the preparation and implementation. This made the SFP sustainable because there was a sense of ownership by the local community members who also happen to be the parents of the day pupils benefiting from the school feeding programme.

Conclusion

By and large, the evaluation study established that the school feeding programme plays a vital role in the school attendance and learning outcome of pupils. The study equally recognized that good nutrition is fundamental for the pupil's current and future health as well as their development and learning. Most schools including St Pauls Secondary school implement the school feeding programme as a pilot project hence the need to put in place effective and efficient evaluation and monitoring mechanisms to help assess the impact of the programme on the school attendance and learning achievement of pupils.

Recommendations

In order to build a comprehensive, effective, efficient,

accountable and sustainable school feeding programme, the following recommendations were brought to light:

- The school should promote the active involvement of parents, communities and local authorities in the development and implementation of school feeding programme.
- The school and other stake holders should advocate for the government to put in place a regulatory framework in order to govern the design, development and implementation of the SFP.
- The school through PTA should apply a multi-disciplinary and multi-stakeholder holistic approach to support effective school feeding programmes and policies at national and local level
- The school should promote the establishment of school gardens as an integral part of the school feeding programme.
- The school should advocate for the integration of school feeding programme or initiative into the school curriculum.
- The school and other stake holders should develop a strong monitoring and evaluation plan and measure the programme impact

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