



## Original Research Article

**Pedagogic Inferences of School Feeding Programme on Primary School Children Enrolment, Attendance and Classroom Participation in Kumbo Central Sub-Division, North West Region of Cameroon**\*Tani Emmanuel Lukong (PhD)<sup>1</sup> and Tata Eric Yuven<sup>2</sup><sup>1,2</sup>Department of Educational Psychology, Faculty of Education, University of Buea, Cameroon.

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**Abstract**

Most children aged between 05 and 15 in developing countries live under difficult circumstances which lead to a high dropout rate from school before the end of secondary level. A major cause of this is the poor nutrition and malnourishment which expose them to a range of harmful, parasitic and infectious diseases. In order to bridge the gap, the United States implemented school feeding programme which is recognised as a key part of food assistance and relief in emergency and development programme. This study thus set out to assess the impacts of school feeding programme on school enrolment, attendance and performance of primary school children in Kumbo Central Sub-Division. The study targeted eight head teachers, 48 teachers, 80 pupils and 48 parents from eight selected schools in the study area. A descriptive survey design was adopted to collect data through surveys, key informant interviews and focus group discussions. The study found that the school feeding programme was introduced in the study area in 2010 and has significantly improved school enrolment in the selected schools. Also, school attendance and performance were found to have significantly improved with the introduction of the school feeding programme. School enrolment improved by an average of 14.35% while school performance increased by an average of 5.65%. These were determined by analysing the situation before the introduction of the programme and when it was introduced. The study recommends that all primary schools in the area in particular and in Cameroon as a whole should implement the school feeding programmes while there is a long-term plan to improve the livelihoods of parents to be able to effectively feed their children while sending them to school. This will continue to enhance school enrolment, attendance and performance.

**Keywords:** Pedagogic inferences, school feeding programme, School Enrolment, attendance and classroom participation.

**Introduction**

School children are particularly vulnerable to short-term hunger, especially where diets of poor quality are consumed. Factors such as the long-distance children walk to school, having to complete chores before going to school and poor quality and quantity of meals consumed at home, contribute to hunger in school children. Children who come to school hungry have diminished attentiveness, a greater likelihood of becoming distracted and a lack of interest, resulting in failure, low achievement and repetition (Doh 2005). Although a child may be at school, he may not pay attention to a learning task if he is hungry even if there is a balance between the quality of teaching and the child's ability to learn, the actual time spent on the task is probably the most critical component of learning. Relieving a child's hunger may improve the ability to concentrate and then by facilitate learning children's memory may also improve so that they are more likely to learn (Giantham McGregor, 2005).

Evidence indicates that hunger leads to psychosocial disfunction in children particularly increasing their levels of aggression and anxiety, indicating that hungry children are at greater risk of non-productive behaviour in class. Stunting,

an indicator of chronic malnutrition is widespread among school age children with negative effects on their education (WFP, 2006). Research has indicated that both acute and chronic hunger affect children's access to school, their attention span, behaviour in class and education outcomes. Studies have shown that children suffering from short-term hunger as a result of skipping breakfast for example, have difficulty concentrating in class and performing complex tasks (Doh 2005, WFP 2006).

Education health and nutrition cannot be considered in isolation. A holistic approach to children's well-being should be followed (WFP, 2006). Hunger is a barrier to learning and school feeding programmes throughout the world have successfully attracted children to school by offering them food or a nourishing snack. The primary objective to a school feeding programme is to provide meals or snacks to alleviate short term hunger, thus enabling children to learn. School feeding programmes have proven effective in encouraging enrolment, increasing attention span and improving school attendance (McGregor et al, 1998, UNICEF, 2005). Innovative programmes in schools have gone a long way to improve academic achievement of pupils. These innovative programmes include; school feeding programmes, e-learning and mobile library. For the purpose of this study, we want to investigate the impact of school feeding programme, e-learning and mobile library on school enrolment.

### **Etymological foundations of school feeding programmes and Learning Outcomes**

The Millennium Development Goals (MDGs) set targets for realizing these values around the world by 2015 and served as a focus for the United Nations' work throughout the period; eradicate extreme poverty and hunger; achieve universal primary education; promote gender equality and empower women. All 191 United Nation member states, and at least 22 international organisations committed to help achieve the MDGs by 2015. Overall, the world achieves far less than one-third of this target. The UN Secretary General at the time, Ban Ki Moon, linked the lack of progress to unmet commitment, inadequate resources, lack of focus and accountability, and insufficient interest in sustainable development (UN, 2020). This led to the goals being extended to 2030 in what is referred as the Sustainable Development Goals (SDGs). The World Food Summit, held in Rome in 1996, highlighted the need to increase access to education for the poor and the members of disadvantaged groups including rural people, in order to achieve poverty eradication, food security, durable peace and sustainable development.

The 2002 World Summit on Sustainable Development, held in Johannesburg, also emphasized the role of education. As the majority of the world's poor illiterate and undernourished live in rural areas, it is a major challenge to ensure their access to quality education. The lack of learning opportunities is directly related to rural poverty. Hence, education and training strategies need to be integrated within sustainable rural development strategies, through plans of action that are multi-sectorial and interdisciplinary. This means creating new partnerships among policy makers and practitioners working in agriculture and rural development and those working in education.

It is well known and documented that prevalent poverty has devastating effects on the physical status and health of children and other vulnerable groups. Malnutrition results from the interaction of poor-quality diets, an imbalance in energy intake and energy expenditure, lack of physical activity and increased sedentary behavior and insufficient or lack of health care and sanitation. In particular, poor-quality diets and lack of health care and sanitation are themselves partly the result of many underlying factors, including political instability, poor economic development, conflict and social inequality. There is a growing body of evidence confirming the association between child malnutrition and subsequent poor school performance, cognitive development, attention and attendance (FAO, IFAD and WFP, 2015) challenge: 2030 agenda for sustainable development; and the sustainable development goals, the United Nations General Assembly with Resolution 70/259, reinforced the call for action by endorsing the outcomes and proclaiming the period 2016 to 2025 the United Nations Decade of Action on Nutrition. This provides an opportunity for government, academia, civil society and other stakeholders to work together over the next ten years towards eradication and prevention of all forms of malnutrition. "Within the 2030 agenda, it is now the time to renew the call to action for zero hunger and malnutrition, and for the deep transformation required on agriculture and food systems to build an inclusive, safe sustainable and resilient society" (UN, 2016).

One of the programmes receiving increasing attention in recent years is school feeding programmes. School feeding programmes are recognized as a key part of food assistance and relief in emergency and development programme. School feeding programmes have been used for decades to alleviate hunger, increase enrolment rate, reduce absenteeism and improve educational outcomes. Beyond these benefits for children when linked to local small holder farmers and agricultural development, school feeding can also create business opportunity (and reduce risk aversion) for small holder farmers and other vulnerable producers (including women) youth and members of traditional communities) boasting income-generating opportunities for local communities. It can ensure the diversification of food procurement, by increasing the use of traditional and underutilized foods. When school feeding programmes are planned and supported by an adequate institutional political and legal environment, they can produce benefits across multiple sectors (Drake et al. 2016).

In this regard, programmes such as school feeding that link local food production, purchasing and delivery are referred to as home grown feeding. As an institutional market, schools can contribute to the scouring of healthy food development of short supply chains and improvement of the livelihoods of small holder farmers. Furthermore, demand from schools; a diversified food basket can make agriculture nutrition sensitive (Gelli, Nesser and Drake, 2010, UNSCN, 2018).

As of now, Ghana, Nigeria and Kenya are arguably the leading countries in the sub-Saharan region of Africa that run extensive home-grown school feeding programmes with substantial national resources in alignment with the comprehensive African Agricultural Development Programme Framework for African Food Security. And although many other African countries have shown interest in home grown school feeding programmes, most countries have not yet adopted exit strategies from externally supported projects and for transitioning to nationally owned programmes (Gelli, Neeser and Drake, 2010).

School feeding programmes are far more than food giving. They are an investment in the world's poorest children. They are an investment in common future and global stability. School feeding can bring children into school and all of hunger. Strong partnership can increase factors that pull children to school. Partnership is key to the success of any school feeding intervention. School feeding must complement education interventions. Educational provision, in quality and quantity, must be able to respond to the increased demand resulting from school feeding programmes. With national governments in the lead, local organizations, international agencies and donors must increase commitment to education and work together to coordinate the wide spectrum of interventions that make this commitment real.

Partnerships in school feeding are on the rise, since early 2008, the World Bank Group and WFP have been working together to help countries develop sustainable school feeding programs that provide social safety nets and promote education. The dimensions of food security and bad agricultural production have been added to the work of this partnership through links with New Partnership for Africa's Development (NEPAD)/Comprehensive Africa Agriculture Development Programme (CAADP), WFP's purchase for progress programme and grant to the partnership for child development from the Bill and Melinda Gates Foundation (BMGF).

Many international non-governmental organizations (NGOs) are engaged in school feeding including World Vision International, Catholic Relief Services, Norwegian Refugee Council, CARF, Plan International and Joint Aid Management. These partners provide implementation support and complementary activities. Partners in the private sector include the Boston Consulting Group, TNT and Unilever. Other partners include Bill and Melinda Gates on, Global Child Nutrition Foundation and International Food Policy Research Institute.

In 2009, WFP assisted school feeding programmes were implemented in 63 countries and reached approximately 22 million boys and girls. School feeding includes on site school meals, snacks and take-home rations. "School lunches are the most cost effective and powerful tool in the world to empower girls' human right. When we feed a girl we help empower a family, a village and a nation" (Joselde Skeran Executive Director, WFP). The WFP reaches girls through school meals, snacks and take-home rations. Meals at school provide a nutritional incentive for girls to attend school. They reduce short-term hunger and provide the micronutrients needed to grow and learn. School meals also affect some of the cost of education so that a poor family has one less meal per day to provide.

The WFP seek to increase the percentage of girls going to school through targeted interventions such as take-home rations. The rations are given to girls in return for meeting a mini-school attendance requirement (usually a minimum of 20 days per month). The take-home rations may be provided alone or in addition to school meals. The rations offset the family's loss of girls' labour and are effective economic incentives for families to send their girls to school. Take home rations are also appropriate in providing support to vulnerable children such as orphans. The number of girls reached by school feeding has increased from 8 million girls in 2002 to 10.2 million or 47% of school feeding beneficiaries in 2009. Take-home rations contributed to the education of 3 million girls in 2009. School feeding serves as an incentive for girls to move to secondary education.

In January 2016, at the 26<sup>th</sup> session of the African Union (AU) Assembly in Ethiopia, AU member states adopted Agenda 2063, a 50-year vision and Action Plan. This agenda embodies Africa's aspirations for a better world, through transformative investments and inclusive growth. Education and skills development are keys to achieving inclusive growth in African countries. In this context, school feed has been handled as an important tool in building the capabilities of countries to transition to sustainable development. AU member states recognized the value of home grown school feeding programmes in enhancing retention and performances of children in schools and in boasting income generating opportunities for local communities, and declared a continental school feeding day to be commemorated yearly in 1 March (African Union, 2016).

In school age, food insecurity causes several causes, several damages to children (WFP 2006, pp 45-46). It can lower school enrolment and attendance, and then it can limit the capacity to concentrate and perform in school. Since schooling is seen as an essential opportunity for learning, these are large impediments to child mental development. Another relevant problem in this stage is that food insecure families face higher opportunity cost in sending children to school because they could earn and provide means of subsistence to the household members. Such opportunity costs are even larger if school fees exist.

In terms of policy, both governments and international organizations such as FAO and WFP prevalently intervene during early childhood and school age stages. In the first case, through iron and micronutrients supplementary diet, and in the second case, mainly through school feed. School feeding is a typical policy applied to increase children school attendance and concentration in the classroom, by providing them with food at school. This also contributes to lower the opportunity costs of food insecure families since they have to feed fewer members.

In the early childhood, lack of proper stimulation undermines child's capacity to learn and be food secure in the future. There are no direct, immediate effects on his or her food security (WFP 2006, pp. 51-53). School age is crucial for both current and future dimensions of food security (availability, access and utilization). In school, children directly learn subjects related to nutrition, health and hygiene (utilization dimension), acquire life-skills and finally obtain knowledge and skills to use in future working experiences. During adulthood specific programmes such as extension services in agriculture can increase household food availability and income (access to food). Moreover, adults have the opportunity to learn certain behavior connected with food utilization that they did not learn previously.

It is important to point out that this chapter has provided brief but fairly exhaustive examination of linkage between the two phenomena. Due to data constraints and limit related to the modelling of economic and social relationships, the quantitative analysis will be able to reproduce only partly the theoretical framework. A wide approach than the human capital approach allows to access the multiple channels through which an educated and skilled society can reduce food insecurity among rural people of low-income countries. Furthermore, this has important policy implications: the type of education that could be useful for the purpose could go much beyond the simple functional literacy and agricultural extension services. The capability approach, in fact, stresses the importance of education for general child and adult's development. The empirical analysis will intend to access also the level of formal education countries should invest in for the purpose of alleviating rural food insecurity.

The Government of the Republic of Cameroon on August 14, 2020 formerly recognized the United States non-profit Nascent Solutions as a development partner by signing an establishment agreement with the organization in Cameroon's Ministry of External Affairs.

For the past 15 years, Nascent has developed a dynamic partnership with the US Government through its agencies, particularly the United States Department of Agriculture (USDA), the United States Agency for International Development (USAID) and the department of Defense. With funding from these agencies, and other charities, Nascent has successfully implemented development and humanitarian programs with over 10million less privileged people in its target countries. Nascent Solutions has so far provided in-schools meals to more than 500.000 primary school children, their teachers and family members in about 100 schools in 50 villages in the North West Region and is currently embarked on similar project in the Adamawa, East and North Regions of the country. It has trained teachers in literacy education, parents in gardening and built or refurbished dilapidated classroom in those schools. Since 2008, the organization has brought in more than 50 million US dollars (about 26 billion francs) worth of funding into the country.

Nascent solutions implemented the MC Govern Dole International food for education and child nutrition project since 2008 to assists primary schools in four Regions of Cameroon and seek to improve the literacy of school-age children and increase their use of good health and dietary practices. These Regions suffer on average, moderates to severe food insecurity in more than 15% households. A recent influx of conflict refugees from Nigeria and CAR into the Adamawa, East and North Regions, has further taxed the already meagre food supply of those regions. In 2017, around 450.000 school children of school age (3 to 17 years) acquired humanitarian assistance in the East, Adamawa and North. Stunted growth, as a result of malnutrition is evident in up to 39% of children in some of these communities. This chronic malnourishment severely impacts learning and academic success; obstacles compounded by endemic lack of school infrastructure overcrowded classrooms where classroom is present, inadequate school materials and poor teaching training. Nascent's implementation of the Mc Govern-Dole International Food for education and child nutrition programme seeks to significantly improve literacy instrument, pupil attentiveness; and increase to use of positive health and dietary practices.

The project has benefited 180.000 primary level pupils, family members, teachers' administrators, civil servants, parent-teacher association members and other associations with 265 primary schools across four regions (Adamawa, East, North

and North West) of Cameroon. The targeted schools include government-operated public schools, and private schools affiliated with Baptist, Catholic, Islamic and Presbyterian Faiths. The 265 schools have more than 90,000 enrolled pupils and more than 1,200 teachers. Approximately 81% of the schools are in three French-speaking regions of Cameroon (Adamawa, East, and North), with the remainder in one English speaking region (North West)

Nascent has convened a group of partners and stakeholders to ensure the success of the programs these includes, the Ministry of Basic Education, Ministry of Public Health, Ministry of Agriculture and Rural Developments, Ministry of Water and Energy, university of Illinois at Urbana-Champaign (Agreach program, Caritas Kumbo, Michigan State University, and the International Literacy Society.

In Kumbo Central Sub-Divisions North West Region of Cameroon Nascent Solution since 2008 has been involved in providing school meals for Nursery and primary schools in Public, Mission and lay private schools. The organization has also been involved in the construction of school gardens for growing green spices which are used to prepare the school meals. The program also gives take-home rations to school children who attend school continuously for certain period of time. Nascent solution has also been engaged with the supply of books to school which are signed out by parents and use to teach children at home in order to encourage reading and literacy amongst Nursery and Primary School children in Kumbo Centre Sub-division. The organization had also been encouraging targeted schools to own school farms in order to incorporate local produced food to the one they supply and thus improve on quality and quantity.

Recently, with the crisis in the two Anglophone Regions of the country and the closure of schools as a consequence the book supply program was moved to private, Church and neutral sites from where parents sign out books to use in teaching children at home. To encourage this, Nascent Solutions have been organizing reading competition in different quarters in Kumbo Centre Sub-division and awarding prizes to the best kids. During such prizes giving ceremonies, they have been giving seminars on E-learning to create awareness in the population. Also to encourage the habit of signing out books and reading, Nascent Solution after every month has been sharing take-home rations to these who signed out books for that month.

With the recent emergence of COVID-19 pandemic, Nascent Solution organized seminars on hand washing and donated soaps, buckets and cups to most villages around Kumbo Centre Sub-division. They also trained volunteer health workers to go to Njanji houses, Church groups, Salama house and other groups around the Subdivision to give advice to people on the measures to be used to combat the pandemic. The study is guided by the Theoretical Framework for studying school nutrition education programme developed by Ardyth Harris Gillespie (1983).

## Overview of School Feeding Programmes

School feeding programme has been provided in schools worldwide. World Food Programme (WFP) in collaboration with other stake holders have worked hand in hand to provide school feeding programme in developing countries. School feeding programme faces several challenges that include high poverty level, limited resources due to high number of children in need of food and difficult terrain, high logistical cost, delivery problems and issue of sustainability due to high cost of school feeding programme and harsh climate condition like frequent droughts (Songa, 2011). Despite these challenges a number of studies carried out globally shows that school feeding program can play a significant role in improving school attendance and enrolment in some areas. In Asia specifically Armenia, food attracted 30,000 children to school in rural communities which are vulnerable (Chant and Mellwarne, 2008). Further a study carried out in India revealed that mid-day meals attracted 15% of female children in school (Shafii & Shafii, 2001). This can justify that the role of school feeding programme in schools cannot be underestimated.

In Burkina Faso, the operation of school canteens increased school enrolment, regular attendance and consistently lowered repeater and dropout rates in disadvantaged areas. Higher success rates on national exams were recorded in this area. The closure of school canteens in the area was followed by high absenteeism. School years only commence with arrival of food stocks in school canteen (Reiser & common wealth secretariat, 2012). In addition, a three months evaluation of school feeding programme in Malawi, recorded 5% increase in enrolment and 36% increase in attendance (Yendaw and Dayour, 2005).

A study carried out in Nepal revealed that 5% of children who were attending school were stunted while 27% of the children were of normal nutritional status (Roth, 2011). Another study carried out in Ghana confirmed that malnourished children entered school at later age and completed fewer years of school than the better nourished children (World Bank, 2007). Lack of school feeding programme may lead to poor health and according to Croll, Ahwold and Fuller, (2010) children in poor health start school later in life or may not go to school at all. There is need therefore to provide school feeding programme to enhance early enrolment and to reduce dropout rates.

In Kenya, for example. School feeding programme has been in operation for 30 years in primary schools. It began in 1979 with school meal programme initiated by the government of Kenya with the assistance of World Food Programme, the school feeding programme reached 220,000 pupils at pre-school and primary level. As time went by, it expanded to reach 12 million children in primary school (Songa 2011) with the support from WFP, the regular school feeding programme has been implemented by the Government in arid and semi-arid areas and some schools in the slums of many towns. The programme entails the provision of mid-day meals to pre-primary and primary school children. Non-Governmental Organizations have also played a role in the provision of school feeding programme. They operate in unplanned settlements and the beneficiary communities. Regular school feeding programme was feeding 720,000 pupils in primary schools by the year 2011. School feeding programme with the support of WFP have expanded to food insecure regions that are not covered with regular school feeding programme or home-grown school feeding programme. This has helped to mitigate severe effects on drought often experienced in those regions. It also reduces vulnerability that arise from food insecurity and malnutrition that might be caused by consistent food crisis (Songa, 2011).

The Kenyan Government with NEPAD and millennium development Project Hunger Task Force (MDPHTF) had promoted home grown school feeding programmes. This was meant to improve national food production and to ensure children go to school. Home grown school feeding programmes were targeting 590,000 children by 2011 (Bharyara, 2006). Another form of school feeding programmes referred as Njaa Manifuku was started in 2006 by Ministry of Agriculture, Ministry of Education and the Ministry of Health (World Bank, 2012). To eradicate hunger in Kenya, Njaa Manifuku targeted areas with high poverty levels, high levels of dropout school with poor academic performance and high level of malnutrition. It also aimed to enhance health and nutrition of vulnerable people and school children. It integrates school meals with nutrition education and mother/child health and nutrition programmes.

By 2011, it had benefited 37,222 children in 56 schools (World Bank, 2012). These programmes have tremendously increased enrolment and school attendance in some areas. A study carried out in Taita Taveta which is one of the Arid and semi-Arid areas, showed that school feeding programmes increased school enrolment from 78% to 84% in 2004.

School feeding programmes also improve nutrient intake of children and school facilities like water supply and classrooms. Further, it assists school communities and local communities to identify and develop enterprises which can sustain school feeding program in the future. School feeding programmes since it is very important, it can improve child's wellbeing. However, high poverty level mostly in developing countries hinders its provision. Poverty influences children participation in school especially if their parents cannot afford meals. School feeding programmes can be used to address temporary hunger in school (Lopez, Kranes, Mackay and World Bank, 2012) though they are not provided in most pre-schools.

A feeding programme is a scheduled activity of providing enough nutrition and balanced diet to selected group of people. It is a laid down schedule for a school to give food to children to enhance learning and other activities. In order to encourage good performance, a good school feeding programme should be there to encourage enrolment and attendance and discourage dropout, provide the child with the right food for health and strength, prevent children from being hungry while at school. Hungry children cannot pay attention in class (Mitchell et al, 1999). Levinger, (1989) says that school feeding programmes make a difference in enrolment and attendance of children to school. The programme also helps poor families by giving their children a good meal each day and thus saving family food.

School feeding programmes cannot be expected to make a direct measurable contribution to combating malnutrition among children. The focus is on the role of school feeding in maximizing children's learning capacity through the relief of short-term hunger and thus improving performance. The national school feeding programme was founded in 1967 guided by the philosophy "A hungry child cannot learn". It was mainly using locally produced food, from the national cereals and produce from abroad. However, this programme alone could not meet the demands for feeding programming in the country thus, the government encouraged development partners to join in and assist in this venture. The WFP is among the various development partners who have been very supporting in this area (Republic of Kenya and UNICEF).

In 1981, WFP and the government of Kenya started a school feeding programme, which was a joint venture. Its long-term objective was to help Kenya achieve universal primary education in the Arid and semi-arid regions. Food assistance through this programme is channelled to both the pre-schools and primary schools. The immediate objectives of this programme were to maintain regular attendance rates in the schools, increase attention span of learners through provision of school meals, increase enrolment in pre-schools and primary schools. According to a WFP, 2008 survey, the net enrolment rate for boys and girls raised from 77% in 2007 in Kenya, due in part to free primary education and in part the provision of school meals. While gender rate is close to parity with schools with feeding programmes, this suggests that school meals attract the most underprivileged female students in class and also draw hungry children to school each day.

The daily meal mixed with oil and salt provide the children with 703.25 calories, including 13.5 grams of protein and fine grams of fat necessary for their growth. The feeding programmes started with the aim of reducing hungry and malnutrition and increasing school enrolment, attendance and retention as well as boosting domestic food production. As a result, school attendance has increased and improved performance. School feeding transforms school in to potential centers for addressing a range of children's needs. It has the strongest effect on education and in addressing social vulnerability (WFB, 2008).

### **Types of Food for Education**

There are two forms of food for education programmes; school feeding programs and take-home ration. School feeding programme provide meals or snacks to school children on the site, where as take-home rations are provided to school children for consumption at home. Under school feeding programmes the food provided to school children can either be packaged or cooked on site. Pros and cons of these different types of food for education programmes from the perspective of achieving the desired effects and takes into consideration the possibility with agricultural development goal abound. The benefit of the food provided under the school feeding programmes is conditional on the attendance of the child on that specific day thus an advantage of the school feeding programme is that it serves as an incentive for children to attend school on a daily basis to receive a meal, whereas to receive the benefit of take-home rations, pupils need only to attend a specified minimum number of days.

The meals served at school may be nutritionally dense and can easily be fortified with additional nutrients that may be scarce in local diets, such as iron or vitamin A and E. Targeting is broad in that all children at the school are fed, it would be difficult to discern between children of different socio-economic status within a school setting and likely disruptive to the educational experience if some pupils were fed while others were not. Food may be cooked on site or in the form of packaged processed food such as nutritional biscuits.

There are various ways in which food may be procured for the school feeding programme. Until the recent past, food for these programmes often came from donation from developed countries in the form of food aid and delivered through organizations such as the World Food Program. More recently, there have been more emphasis on local (that is national or community level) procurement and as in the case of Burkina Faso (Upton et al, 2012).

Local (national level) value-added production has also become more frequent in Bangladesh where wheat flour donated through World Food Programme was processed by several local firms in a competitive bidding process to produce the fortified biscuits used in the Bangladesh school feeding programme (Ahmed, 2004), while in the Brazilian home-grown school feeding model as much food as possible is sourced from local communities to keep down costs and support local agriculture. Among the three options described in table 1, school feeding programs where children are served cooked meals on the site has the greatest potential for supporting local community level agricultures activities through the procurement of fresh produce/and thus most amendable to the home-grown school feeding model. In the case of take-home rations and school feeding program based on pre-packaged snacks or a breverage, the programme may have to rely on a functional food processing sector at the regional or national level to meet the needs.

Take-home rations area usually conditional to meeting a minimum threshold of attending and are usually distributed monthly; in Burkina Faso, the WFP managed program requires attendance of 90% for that month to receive the monthly ration (*Kangzianga et al, 2008*). This type of program may be useful in targeting specific groups of children or families within a community, as the distribution may occur in a separate location from the school or may occur out of regular school hours. In areas where enrolment and attendance of children is lower for girls, take-home ration may be employed to boost their attendance (and thus promote education for girls). Some food for education programs may include both school feeding programs and take-home ration and some school feeding program may act as a possible take-home ration when children are given pre-packaged food that can be consumed at home and possibly shared with other family members.

Households may decide to keep children from school based upon the direct and indirect cost of attending school. Direct cost includes fees, books and supplies, uniforms and travel to school while indirect costs are in the form of the opportunity costs of children's time rather attending school, households may prefer to have their children take care for other family members, engage in household chores, work on the family farm or business, or work in a wage-earning job (Cheng and Perolti, 2020). If the expected benefits of a child's education do not exceed the costs of attending school, then the household will not sent their child to school (Adelmen et al, 2001). For families that can afford to sent only one or some of their children to school, the decision of which children enroll in school may be determined by who the family feels has the highest expected return to educations which in many cases mean that girls are kept at home.

Reducing the cost of schooling will increase enrolment and attendance rates for children in such circumstances. In the case of a school feeding programme, both a hungry child and parent will have an incentive for daily attendance while for

a take-home ration program, the parents have the incentive to send their children to school for at least the maximum amount of time required to receive the rations (which varies by program). The additional food provided from a take-home ration programme can be used to supplement the family's nutritional programs, the meal provided at school is one fewer meal that the household need to provide to their child. From this perspective, both the school feeding program and take-home rations help families by subsidizing the cost (that is the opportunity costs) of sending their children to school.

### **Impact of the school feeding program**

School Feeding Programme is essential in any country whether it is developed or developing. The primary assumption of School Feeding Programme is that education and learning depend on good nutrition (Briggs, 2008). School health and nutrition also determine factors that keep children out of school and reduced their ability to learn effectively (Save the children U.S.A, 2007). School Feeding Programme is mainly implemented with the purpose of achieving the following results;

- Increase enrolment and attendance.
- Alleviate short term hunger.
- Improve nutritional status.
- Improve micronutrients status (WFP, 2004).  
And also increase learners performance.

### **Increase Enrolment and Attendance**

According to Del Rosso (1999). The provision of food acts as a strong incentive for children to attend school on a regular basis. In many communities' girls mostly benefit from School Feeding Programme because most in families, girls are culturally disadvantaged such that in hardship situations, male children are given opportunity to go to school over girls. School Feeding Programme can provide a way in which parents can save money by spending less on food and thereby allow the girls to attend school. In Jamaica, the study carried out by Del Rosso (1999), showed that the provision of breakfast to primary school students significantly increased attendance.

The pilot study conducted by World Food Programme (WFP) over three months in Malawi showed that School Feeding Programme increased enrolment by 5% and up to 36% improvement in attendance (WFP, 1996). Also, the evaluation findings of School Feeding Programme in Burkina Faso indicated that school canteens were associated with increase school enrolment, regular attendance, consistently lower repeater rates, lower dropout rates and higher success rates on national exams, especially among girls (Moore and Kuntze, 1998).

According to analysis by Gelli (2006), done from WFP's assisted 4,175 schools in 32 Sub-Saharan African countries which provided food to 21.7million children in 2005, showed a 14 percentage yearly increase in school enrolment for both boys and girls. Also the United Nations reported that providing children with take-home rations in addition to school meals increased enrolment in 32 countries and particularly beneficial for girls in the primary school (WFP, 2009).

In 1994 Pakistan tried to address the issue of low enrolment amongst girls and introduced School Feeding Programme which provided snacks of rice to families. This encouraged parents to send their children to school especially girls and this led to increase of enrolment of girls (WFP, 2000). The study carried out by Lamber (2009) in Burkina Faso, the findings showed that in rural schools at four provinces of the Sahel Region in which the school gross enrolment was the lowest in the country (48.8% VS 72.5%) with high gender disparity, especially at the beginning of School Feeding Programme in 2003. The programme started with 234 schools and 30,000 pupils in which statistics shows that the admission rate increased from 50.5% in 2003/4 the first year of the programme to 69.7 in 2008 while the gross rate enrolment also increased from 21.8% to 48.8% over the same period (Lamber, 2009).

Also, the study conducted by World Food Programme (2006) in Zambia, showed that after the introduction of School Feeding Programme, the enrolment of children in basic school increased from 11.1% of the total enrolment in 2002 to 21.1% in 2004 (WFP, 2006). In Tanzania, according to the study carried by Navuri(2011), the findings have shown that the enrolment of standard one in primary schools in 2007 was 8,396,925 from 6,562,722 by 2003 in which the average has risen from 99% in 2010 while dropouts have declined from 6% to 3% (Navuri, 2011).

School feeding programme can improve school attendance (Thompson, Amoroso and FAO of United Nations, 2014). Although they may be considered expensive, school feeding programme benefits could be achieved more cheaply. Food attracts children to school and reduces hunger while they learn. The programmes have considerably impacted on school participation. In Bangladesh for example there was an increase of 14% in enrolment and 6% increase in attendance (Gilligan, 2009). There is therefore need to provide school feeding programme in Kenyan pre-schools since it may decrease the percentage of children not attending school. Munngi (2012) found that 65% of children are not attending school. Even though factors like lack of uniform, sickness, family affairs, lack of food at home, lack of tuition, poor



performance may be contributing to low enrolment and attendance, lack of school feeding programme in many pre-schools may be a major contributing factor.

The large percentage of children not attending pre-school education in Kenya and especially in Arid and semi-Arid areas like North Eastern region could specifically be due to inadequate and underfunding of the school feeding programmes. The feeding programme has recently received renewed attention as a policy instrument for achieving the Millennium Development Goals of Universal Primary Education are hunger reduction in developing countries. However, there is debate among Government and donors about the impact of school feeding programme and whether it is cost effective. According to studies conducted by internal food policy research institute (IFPRI) and the World Bank in collaboration with World Food Programme, well designed school feeding programmes may have broad impact on school attendance, school performance cognitive development, the nutrition status of pre-school children and prevalence of anemia in adolescent girls. In Kenya today, many children do not attend school and there is high prevalence of anemia (Hartjen & Pryadarsni, 2012). This suggests that school feeding programmes in Kenya are not well designed or managed.

Hunger and malnutrition are common in most developing countries, Cameroon included. Most households are food insecure and children in those households usually go to school on an empty stomach (Lambert & WFP, 2009). Del (1999) reveals that children affected by hunger and malnutrition as well as ill health do not have the same potential to do well at school in comparison with well-nourished and healthy ones. Malnutrition affects children's cognitive performance as it reduces the capacity to participate in learning activities. Due to poor cognitive development, children are most likely to perform poorly and repeat classes (Bruhn, 2004). Furthermore, children may absent themselves from school and even drop out if the situation becomes chronic. There have been reported cases of children repeating classes, dropping out of school and others even enrol late in Chepalangu Sub-County due to hunger as a result of persistent drought in the area (Kiplanagt, 2013).

Introduction of universal school breakfast programme improve rate of attendance and punctuality and decrease rate of psychosocial symptoms (Duggan, Walkin Walker, 2008). Amend & Ninno (2002) showed that school feeding programme increased school attendance by a large percentage. In the study they carried out, the overall rate of attendance in school with feeding programme was 70% compared to 58% in non-programme schools. The use of take-home rations also increase attendance significantly since it acts as an incentive to attend school. This therefore suggests that there is need for school feeding programmes in pre-school and primary schools.

Proponents of school feeding programme point to a variety of logistical, empirical and moral factors that suggest the need for school feeding in schools. Despite the fact that there are huge numbers of children not attending school, compared to two decades ago children attending schools in the developing world today have increased slightly. According to that proponent, school feeding programme improve educational outcomes. The longer the children stay in school the less susceptible they are to certain problems for example, contracting HIV or becoming pregnant later during their teenage years (Bennel, 2003).

### **The Role of stakeholders in School Programme**

Stakeholders perform various functions, which help in the facilitation of school feeding programme. According to Keemey (2008), school feeding must take place with the context of broad national school reforms. These reforms should also focus on other essential inputs to education and learning for example teacher development, curriculum reform and student assessment. Although school feeding relieves burden on governments and education ministries in underdeveloped countries like Nigeria, Bangladesh, Malawi, Cameroon and Kenya, national ministries of such countries should not take school feeding programme at the expense of other educational inputs. Many governments and education Ministries in developing countries are struggling to manage functioning education systems and may not be equipped financially to deal with uses of food distribution (Del, 1999). This implies that providing school feeding programme remains a challenge. Bundy and World Bank (2011) supports that the underfunding of school feeding programme in Kenya and other developing countries has remained a challenge. There is therefore need for stake holders to support these programmes.

Stake holders provide finances to support the school feeding programme. In most cases, some portion of food commodities they provide can be sold and proceeds used for the implementation of the programme and other pragmatic inputs. Current proportion of monetization relative to the total of school feeding and food for education programme is 15 percent. Food has an impact on learning is only positive when accompanied with other additional resources.

Stakeholders also work with communities to initiate and own school feeding programmes. This has greatly increased the chances of the programme's success and sustainability. Parents can easily see the need for feeding their children and this can assist in the planning of the programme as well as the preparation and distribution of meals (Del, 1999). In Kenya parents seemed to have failed to support the school feeding programme due to lack of sensitization and persuasion from other stake holders like government.

## Theoretical Frame Work

The study was guided by Ardyth Harris Gillespie theoretical framework for studying school nutrition education (1981). This model suggests a framework for studying school nutrition education programs, facilitating comparative studies and expanding our knowledge of nutrition education. The model could be used to study potential influence on children's current nutrition knowledge, attitudes and behaviour and includes three relevant environments; home and family, school and community. An understanding of these objectives, identifying intervention targets, and determining potentially effective strategies. The model also focuses on the change process as influenced by nutrition education programs as well as the outcomes and a suggested beginning for research to build toward a general understanding of the process of nutrition education.

## Statement of the Problem

Sub-Saharan Africa is home to a larger proportion of the nutritional insecure people in the world. Poor resources and limited infrastructure, compounded with conflicts, HIV, and poor access to health services are factors that contribute to staggering levels of malnutrition and food insecurity on the continent. In the context of Cameroon, most diets especially in rural areas consist of mainly cereals and root crops, and very little in way of animal source protein, micro nutrients, rich vegetables and fruits, and quality diversity of food baskets. These foods are either not accessible because of high cost, not locally available, unequally distributed within households, or are not considered household priorities when incomes are insufficient to meet the needs of high-quality diets.

This is the case in many rural areas as well some parts of the main urban centre in Kumbo Central Sub-Division where insufficient nutritive meals results may result in poor school attendance, participation, performance and absenteeism. This may result in school dropouts and early marriages of female children within the enormous attendant problems. In this situation, youth delinquency thus becomes a major concern especially when more and more young people get involved in malpractices such as theft, sexual violence, drug consumption just to name but these. The situation may have been exacerbated by the growing insecurity brought about by the Anglophone Crisis since 2016. As a result of the crisis, many schools were shut down due to threats from separatists. This did not only lead to a significant drop in school attendance but also a decrease in school for education activities.

Hence, this requires an analysis of the impacts of school feeding programmes, including in the wake of the Anglophone crisis, on school attendance and participation. Even though a number of studies have assessed the impacts of school feeding, evidence of these impacts is not always conclusive especially when done from a macro point of view. Studying such impacts at the local level such as Kumbo Central Sub-Division may usher more conclusive evidence of such impacts or not.

## Objectives

- To examine the influence of school feeding programme on school enrolment.
- To examine the influence of school feeding programme on school attendance.
- To examine the influence of school feeding programme on classroom performance.

## Research Methods

The study employed a descriptive survey design. Descriptive research involves gathering data, describe events, then it also organizes, tabulates, depicts and describes the data collected. The researcher used descriptive research design for descriptive purposes. It is a kind of design used in studies that have individual people as the unit of analysis. It involves some individual persons who must serve as respondents or informants. Mugenda and Mugenda (2003), perpetuate that descriptive research helps in determining and reporting things as there are.

## Sample and Sampling Technique

Sampling is the procedure a researcher uses to gather people, places or things to study. It is a process of selecting a number of individuals or objects from a population such that the selected group contains elements, representative of the characteristics found in the entire group.

## FINDINGS

### Operation of the School Feeding Programme in the Study Area

The school feeding programme started in 2010 in Kumbo Central Sub-Division (KCS). This was a US programme implemented by Nascent Non-Governmental Organisation. It started with 04 nursery and primary schools and today, more than 50 schools are involved in the sub-division alone. The main objective of this programme was to enhance attendance and attentiveness through the provision of nutritive meals. The believe was that when pupils are well fed, they do not get distracted in thinking about what to eat after school.

Since its operation, foods have been regularly supplied to the identified schools. According to one of the field agents of the school feeding programme, a number of criteria are usually taken into consideration for selecting a school. Some of these are, enrolment, school garden, the availability of space for construction, and school farm. Moreover, before accepting a school for the programme baseline information (needs assessment) is collected which essentially excludes schools where attendance and performance are higher as obtained in many urban schools in the sub-division which are essentially elitist.

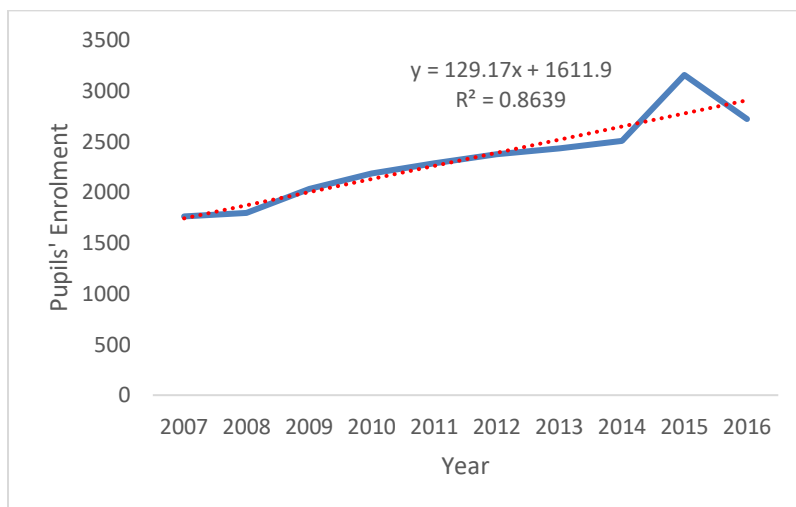
For a school to be selected for the programme, it needs to apply and must meet the selection criteria explained above. The quantity of food supplies is based on enrolment. This means that the higher the enrolment the higher the quantity of foods supplied. The garden is needed for ingredients to be used in preparing lunch for the pupils. On the other hand, the farms are needed to cultivate some of the foods in order to complement the supplies.

The main foods supplied per child, per week are rice, beans and oil. On average, the quantity of lunch food provided is 9 kilograms of rice, 5 kilograms of beans and 2 litres of oil per child, per week in the selected schools. At the beginning of the program, girls were also entitled to take home rations. However, with time, all pupils were also given the take home rations.

The sustainability part of the programme is based on this presence of a garden, construction space and farm such that after the programme, schools can continue to cultivate foods to feed the pupils and ensure their attendance and attentiveness. However, despite the aspects of sustainability of the programme, many schools were not able to maintain their farms and gardens and as such continued to rely exclusively on the school feeding programme. This has been a major challenge to the sustainability of the programme. This implies that if the programme were to end today, the sustainability of it will not be guaranteed.

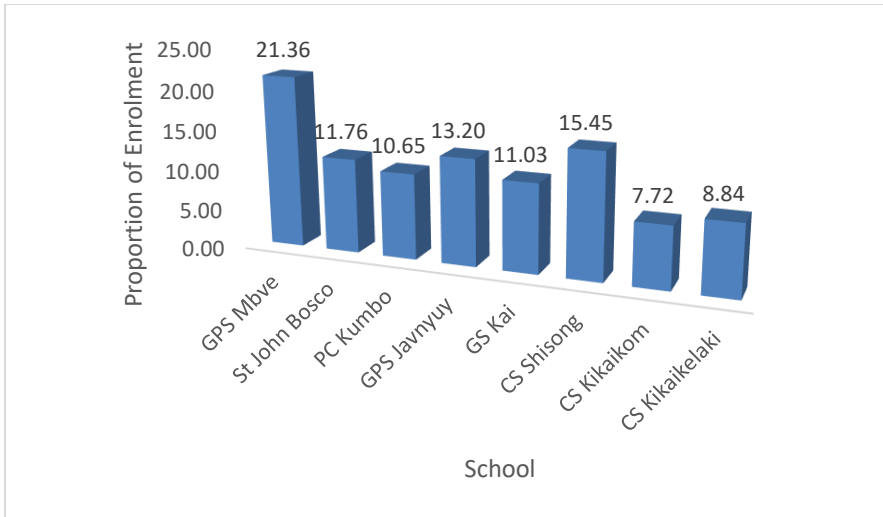
### School enrolment before and after the school feeding programme

This was the first research objective of the study that focused on assessing the levels of school enrolment before and after the commencement of the school feeding programme. All head teachers were asked to provide data which showed the levels of school enrolment before and after the introduction of the programme. From a generic perspective, school enrolment had been on the increase between the period 2007 and 2016 as shown in Figure 1.



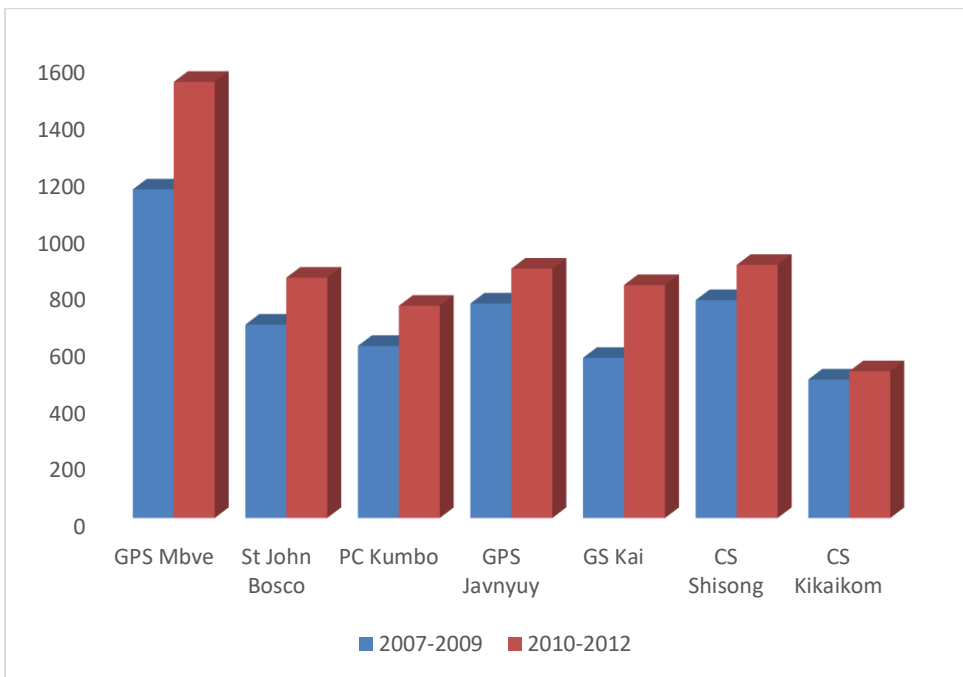
**Figure 1: Trend in the enrolment of pupils between 2007 and 2016.**

Within the period under study, school attendance increased steady at a rate of 8.4 in the eight schools considered for the study. However, there has been variations in the respective trends of these schools (Figure 2). In terms of percentage increases in school attendance, Government Practicing School (GPS) Mbve had the highest proportion of over 21%. The school with the least proportion of school attendance (7.72%) is Catholic School (CS) kikaikelaki.



**Figure 2: Percentage variations in school attendance (2009 to 2016)**

The school feeding program started in 2010. In this regard, it is important to compare the last three years, 2007 – 2009 when the program had not started with the first three years, 2010 – 2016, of school feeding programme implementation. The results obtained are presented in Table 4.4. In the last three years to the implementation of the food for education programme, the total number of enrolments in the eight schools considered for study was 5011 with the mean annual enrolment being 716. The introduction of the school feeding programme on the other hand saw a significant increase in school attendance at 6228 with a mean yearly school attendance of 890. There could be several factors responsible for this significant increase in school enrolment. However, the school feeding programme was a significant motivation behind this observed situation.



**Figure 3: Comparing school enrolment before and with the implementation of the school for education programme**

Findings showed that all the selected schools in Kumbo Central Sub Division has witness and increase in school enrolment apart from C.S Kikaikelaki and C.S Kikaikom where enrolment seemed to not have increased in a noticeable manner.

Head teachers were also asked to describe the level of school enrolment before and after the commencement of the school feeding programme. Out of the eight head teachers, seven indicated that the enrolment had increased after the introduction of the school feeding programme, while one head teacher said that the enrolment stayed at the same level (static). When asked to give reasons for their responses, one of the head teachers from the school whose enrolment had increased stated that

*“School feeding had encouraged the majority of parents to enrolled their pupils because they know that their children will have meals while at school instead of stay home hungry”*

The head teacher from the school which had recorded static enrolment said that “the enrolment of pupils had not increased or decreased and this was associated with the negative attitude of parents and the community at large towards the importance of education of their children”. The head teacher further explained that, some families encouraged their children to engage in economic activities, especially agriculture and learning a trade or selling items in the market to earn a living for the family.

Furthermore, teachers were also asked to describe the levels of the increase of school enrolment before and after the commencement of the SFP. Out of the 46 teachers from the sampled schools, 44 teachers (95.83%) responded that there was an increase in school enrolment after commencement of the school feeding programme. They stated that an increase in school enrolment was attributed to the introduction of SFP at various primary schools.

Also, during the interviews with parents around the selected schools, most of them said that the school feeding programme enables even those pupils from poor families to enroll as they were assured of a meal at school. According to the basic theory of Abraham Maslow, there is certain minimum requirements that are essential to a descent standard of living such as food. Pupils who lack meals/food are unable to express interest for higher needs at school levels. The application of the basic need theory can be observed in the children enrolment in schools.

### Factors affecting school enrolment

Despite the presence of the school feeding programme, during this research study, head teachers from sampled schools pointed out that there were other factors affecting school enrolment as indicated in Table 10.

**Table 1: Responses of head teachers on factors affecting school enrolment**

Factors affecting enrolment	Frequency	Percentage
Parents negative attitude towards education	2	25
Long distance	2	25
Poverty	4	50
Total	8	100

Most of the head teachers mentioned that parents’ negative attitude toward education discouraged their children to be enrolled in school because they saw schooling as a waste. Poverty was mentioned by head teachers in 50 parents of the selected primary schools. They pointed out that poverty among different families had problems in school enrolment most of such poor families discouraged their children from being enrolled in schools and rather encouraged them to engage in family activities as a source of labour power and help the family to raise income. Also, during interview with parents, most parents who failed to enrol their children in school pointed out that it was because of the different school costs such as buying clothing, books, pens or pencils. There were also required to contribute a certain amount of money per child so as to facilitate the school feeding programme at respective schools.

### Effect of school feeding programme on school attendance

This was the second research objective which focused on the effects of school feeding programme on students’ attendance. The following information was provided by the different respondents. All the head teachers from the selected schools indicated that the attendance went up since the commencement of the school feeding programme. For example, one head teacher said that due to the commencement of school feeding programme, class attendance has become quite regular. Out of the 48 teachers, 46(93.88%) indicated that pupils attended school regularly, while 2(06.12%) were irregular. Most of the teachers said that some pupils attended school because of the school feeding programme and this had encourage some pupil to attend school regularly.

### Factors affecting school attendance

During the research, Head teachers from the selected schools indicated that there are several factors affecting school attendance apart from the availability of school feeding programme. Two (25%) out of 8 Head teachers of the selected schools mentioned that long distance from schools affected attendance. Children were forced to walk long distances to

locate schools in order to receive education. This became dangerous for young children who had to cross rivers and pass through thick bushes especially during the rainy season. To save their lives, children stayed home until they got support from their parents to escort them to school.

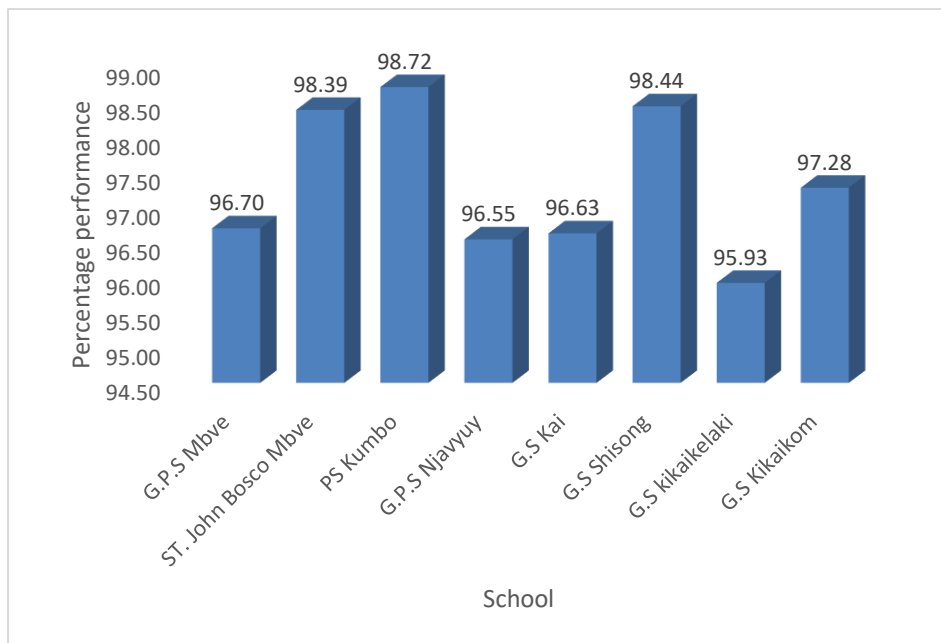
Another factor mentioned by two (25%) of the Head teacher was parents' negative attitude toward Education. Some parent seem to discourage their children from attending school regularly by committing them with some other responsibilities like farming and selling, in order to generate income for the family. This greatly affected the children attendance in school.

More so, three (37.5%) of the Head teachers mentioned poverty as another factor that affected school attendance. For example, parents were required to pay a certain amount of money so as to get money to acquire certain attempts for the cooking the food and also a certain amount as P.T.A levy and/ or school fees. During the time of carrying out the study, the researcher found out that parents contribution ranged from 3500frs in public school to 15000frs in mission schools. Once parents failed to pay such amount of money, the pupils were often sent out of school. This situation therefore negatively affected school attendance as daily records of attendance indicated.

Lastly, one Head teacher (12.5%) mentioned that sickness among pupils was another factor that affected school attendance negatively. It was revealed that when pupils were sick, it was not possible for them to attend school regularly. Also, it was pointed out that girls were likely to be withdrawn from school to care for sick family members or guardians and their younger siblings.

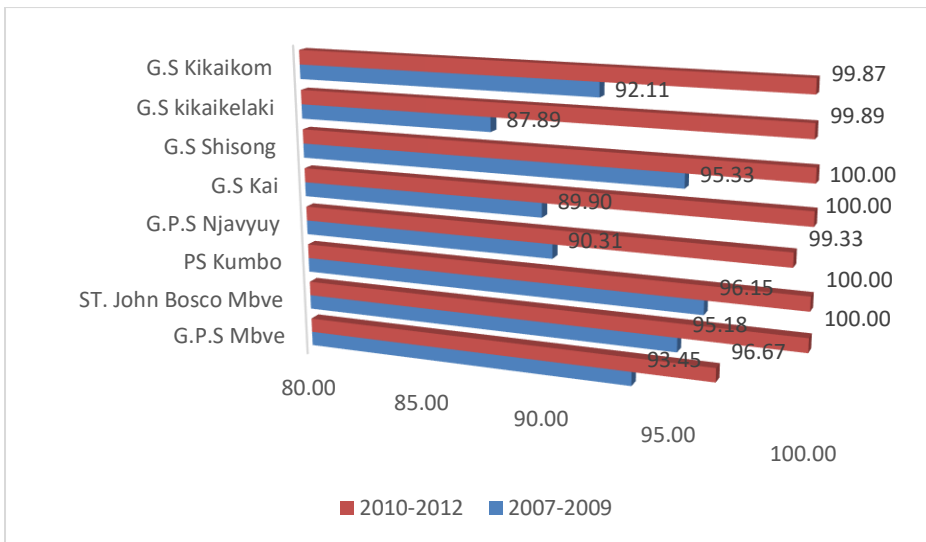
### Effect of school feeding programme on pupils' Academic performance

This was the third research objective which focused on investigating the effects of school feeding programme on pupils' academic performance. Overall, throughout the period of study, the percentage performance in First School Leaving Certificates of the surveyed schools was above 90, when the mean score being 97.33%. Considering this period, the school with the highest rate of performance is PS Kumbo (98.72) while the one with the least performance is GS Kikaikelaki with a rate of performance of 95.93% (Figure 4).



**Figure 4: Overall performances of surveyed schools at FSLC during the period under study**

However, it is necessary compare the performance before the school feeding programme and during its implementation. The results obtained are presented in Figure 8. In terms of performance at the said examinations, the mean performance was 92.54% in the last three years before the school feeding programme and rose to 99.47% in the first three years of programme implementation. Before this period, GS Shisong had the highest performance rate of 95.33%, with GS Kikaikelaki being the least. However, three years into the implementation of the programme, four schools (GS Shisong, GS Kai, PS Kumbo and St John Bosco Mbveh) each recorded 100% performance at the FSLC examinations.



**Figure 5: Comparing the performance of pupils before and when the school feeding programme was introduced**

The findings showed that there have been an increased in pupils performance in the pass years. In addition, head teachers of the selected schools indicated that the academic performance had increased since the introduction of the school feeding programme.

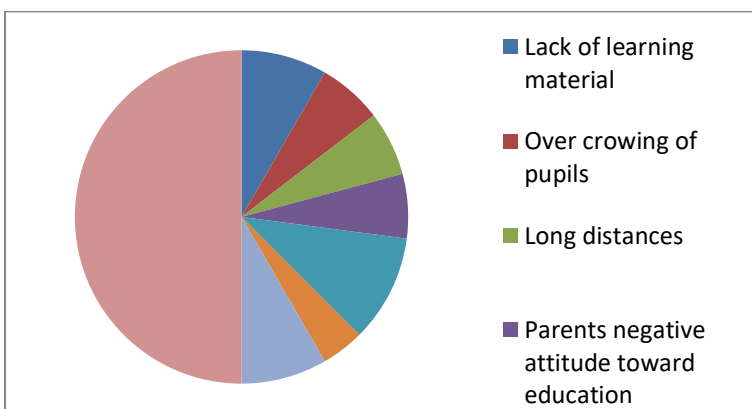
During the focus group discussions pupils in their groups had varying comments according to school performance. Using their learning experience, that is, end of term examination results and through announcements of school authorities, some pupils indicated that the performance was high but some mentioned that it was low.

The head teachers, teachers, pupils and parents from the selected schools attributed the improvement in academic performance to the presence of the school feeding programme. These findings showed that the school feeding was one of the reasons for the improvement in academic performance.

**Factors affecting Academic performance**

Head teachers from the selected schools mentioned several factors that affect academic performance. The head teachers in particular pointed out the fact of inadequate school facilities in primary schools, such as text books for every pupil, furniture especially desks and shortage of teachers greatly affect academic performance in almost all primary schools.

Again, teachers from selected schools mention several factors which affected school academic performance. Such factors include, lack of teaching and learning material, overcrowding of pupils in one classroom, lack of school furniture, inadequate number of teachers, long distance to and from school and parents’ negative attitude toward education.



**Figure 6: responses of teachers and factors affecting academic performance**

Most of the selected schools mentioned that there was low rate in school academic performance for some schools and this was associated with non-availability of teaching and learning material. Such situations had a negative impact on the

performance of both teachers and pupils. The lack of material in form of text books meant that teachers had to write or draw anything on the blackboard. This was one of the reasons why teachers did not cover their syllables.

During focus group discussion, the pupils said that they were sharing books in some cases in ratio of 1:6. For the case of pupils exposed to crowded classes with inadequate textbooks and furniture, learning could not yield modest academic performance. Furthermore, school furniture was mentioned by some of the respondents that this affected pupils' academic performance. They said that a child who was comfortably seated on a chair or desk in the class room could concentrate well during lessons better than one who is standing or sitting on the floor. Teachers, parents and pupils from some of the selected schools indicated that there was inadequate furniture due to overcrowded classes.

The findings disclosed that in almost all the selected schools, one desk was occupied by three and at times pupils. some of them claimed that they could not even write properly because they were squeezed on one desk and this affected concentration during the teaching and learning process. Shortage of teachers was also mentioned as one of the key factors which hindered good academic performance in some of the selected schools. The study findings indicated that most of the selected schools had teachers less than the required number. As a result of this situation, the few teachers available in the schools were overloaded and thus were expected to perform more responsibilities that eventually made them to be ineffective.

Long distances were mentioned by pupils, head teachers and parents as another factor that negatively affected academic performance. The pupil explained during the Group Discussion that when they move long distance to school, they are too tired to concentrate on school work, and girls are less able than boys to face physical hazard like swollen rivers or dangerous escarpment on the way to school. The head teachers and teachers were also asked to comment on other pedagogic innovative programmes, namely, e-learning and mobile reading.

## Discussion of Findings

The first objectives of study focused on the effect of school feeding programme and on the school enrolment. Generally, the findings from the study showed that the majority of respondent (head teacher, teachers, pupils, and parents) indicated that there was an increase in enrolment after the commencement of the school feeding programme while a few recorded static in school enrolment. However, there are many others factors that were mentioned which contributed to disparity in school enrolment but the introduction of school feeding programme was seen as a major factor which increased school enrolment.

Also, it was recorded that due to shortage of food because of draught and poverty of too many communities in Kumbo centre subdivision, school feeding programme encouraged many parents to enroll their children when pupils were served with food. This was supported by the focus group discussion with pupils enrolled in schools where food was given who reported that this situation increased school enrolment.

This study is similar to the research conducted by WFP (2000) which showed that generally the provision of food to pupils at school encouraged those who are not in school to be in school. Also, it helped those who came to school on an empty stomach to have something to eat. Furthermore, it enabled even those pupils from poor families to enrol as they were assured of food at school. According to the Basic Need Theory of Abraham Maslow, there are certain minimum requirements that are essential to a decent standard of living, one of which is food. Pupils who lack meals / food are unable to express interest for higher needs. At school level, the application of the Basic Need Theory can be observed in the children enrolled in school.

This study is also similar to the research carried out in Pakistan where donors started to address the problem of lower enrolment amongst the girls in which the world food programme provided food such as snacks of rice to pupils from poor families (WFP 2003). It was recorded that parent's response was overwhelming and led to enrolment of the school child to be doubled. The findings from the study also pointed out that poor enrolment in school were contributed by a number of factors which included poverty in most households. These findings are similar to those from a study carried out by CSO (2004) in Kibera the biggest slum in Nairobi Kenya in which parents had been unable to enrol their children in school because of poverty. Other research findings from this study indicated that most of the poor parents saw schooling as a wastage of time because it was perceived as non- profitable to them.

The second research objective focused on the effects of school feeding programme on school attendance. Parfkerka (2017) while investigating the impact of school feeding programme on educational outcome in Burkina Faso also concluded that school feeding programme had the potential to increase girls' educational attainment and gender equality within schools. He concluded that school feeding programme raised the primary school gross enrolments to a significant level. The results of these studies are also in line with many previous findings.

Indeed, Chaung and Berlin (2014) found that school that school feeding programme boosted school enrolment in the short term by five percent while Ahmed and Del Nimo (2002) found that school feeding programmes were effective in



increasing enrolment and attendance in Bangladesh. The authors found that the increased enrolment was driven by a forty-four percent (44%) increase in girls' enrolment and by a 28% increase for boys contrary to Kazianca et al (2009) in the Sahel region, who found that school feeding programme increased enrolment for girls by six percent point at household level, our results show that school feeding programme had a smaller effect. This is due to the fact that this particular programme targeted the school level, thus reducing the effective impact.

It was also revealed from the findings of this study that the majority of the respondent (head teachers, teachers, pupils and parents) pointed out that the introduction of school feeding programme encouraged most of the children who previously stay away from school during the period of hunger to attend school regularly. For example, during focus group discussion with pupils, it was found that many children opted to attend school where food was given.

The findings of this study equally agree with Aldeman et al., (2008), who observed that school meal can be effective in class attendance because children receive meal only when they attend school by eliminating short term hunger of school children during the school day by providing the child with a meal when he or she would not have otherwise have had, or replacing a meal that would have been received after school with one during school hours. But these findings may not hold according to Adelman et al., (2008) who noted that the influence SFP will depend on the prevailing opportunity cost where he gave an example of places where child labour forms the integral part of agricultural work during a particular day/season of a year, class attendance could be low. In such cases, school meals may or may not encourage school attendance depending on how the beneficiaries value them.

The head teachers, teachers, pupils and parents revealed that, pupils were encouraged to attend school regularly due to presence of school meals and as a result their performance improved. These findings are similar to the research carried out by Ahmed (2004) in Bangladesh whose findings showed that the increase in enrolment and competition rates, improved performance in achievement tests of children receiving meals/food at school. The findings are also similar to the studies carried out by Taras (2005), where they showed that school feeding improved the cognitive mind of the pupils while at school by reducing short term hunger in the classroom. However, some parents during the research recorded that the academic performance of their children improved because they encourage them to study hard understanding the importance of education to their future life.

The findings of the study also agree with Adelman et al., (2008) and Ahmed (2004) who agreed that school feeding programme enhanced school retention and performance both in the short and in the long run. In the short run, school may could alleviate hunger and make children concentrate and learn better so that school performance will be improved and hence drop-out is minimized. The findings of the study also agree with Vormeeseh and Krener (2004) who found in their study that the school feeding programme increased the participation of children and thus resulted in increased performance of the pupils.

Nevertheless, head teachers and teachers, revealed that pupils were encouraged to attend school regularly as a result their performance improved. School feeding was seen as a safety valve especially for poor families and also tended to keep children in school and the pupils concentrate better on their lessons. These findings are similar to the study carried out by Madeley, (2000) who found out that providing pupils with food at schools helped them to concentrate better in their lessons. However, the researcher found out that despite the provision of school feeding programme in some of the selected schools, a few pupils were still irregular in school because some parents still had negative attitudes towards education and his affected their academic performance negatively.

Lastly the provision of food through school feeding programme can be considered to address the basic need required to enhance school enrolment, attendance and academic performance of the pupils at primary schools. The Basic Need Theory of Maslow indicates that when children are served with food, they attend and stay in school and their attention span is improved by solving short term hunger. The provision of school meals/ food therefore can be considered at school level as stepping the ladder for the pupils to improve their learning process no matter how long the ladder is, each pupil has to start with the lowest step. But in order to reach other needs up to the stair of the ladder, the provision of food should be the first for it helps to enhance school enrolment, attendance and academic performance.

## Recommendations

Based on the findings of the study, the following recommendations were advanced for consideration by educational stakeholders:

- School feeding programme have a positive impact on school enrolment, attendance and academic performance. The government through the Ministry of Basic Education should expand and improve school infrastructure in order to cater for the enrolled pupils who have been attracted by the school feeding programme and should build more schools close to the communities in order to solve the problem of long distances that pupils have to trek daily to and from school.

- The government and nongovernmental organizations should encourage parents to build the culture of contributing for the proper implementation of the SFPS. This can be done through opening farm projects from which the produced food items could be used for children.
- Government and nongovernmental organizations should improve and expand the school feeding programme to be extended to all schools so as to boost enrolment school attendance and academic performance in all communities in the sub region and in the whole nation.
- Government and non-governmental organisations should improve on the facilities put in place for e-learning and mobile libraries in order to boost enrolment and thus attendance and performance.

## Conclusion

The purpose of the study was to investigate if school feeding programme had enhanced school enrolment, attendance and academic performance in selected primary schools in Kumbo centre sub-division. The study findings have proven that there was recorded positive outcome accredited to school feedings programme where seven out of the eight schools in the sample had positive outcomes as regards to school enrolment and attendance, and there was modest achievement in academic performance. School feeding programme has been capable of addressing the issue of low school enrolment and attendance, however, only a modest improvement has been achieved in terms of academic performance of pupils. There was an increase in enrolment and attendance in most of the selected primary school after the commencement of the school feeding programme and another factor was parental encouragement of their children. However, static enrolment was also recorded in one of the selected schools. This was attributed to parent's negative attitude toward education, poverty and long distance from schools.

More so, despite the positive impacts that school feeding programme had increased school enrolment, school attendance and even academic performance of pupils in most of the selected schools, negative impacts, were also recorded to affect the objective of this study. It was noted that school feeding programme had increased enrolment. Unfortunately, this caused overcrowded classes and led to obstacles such as limited space, inadequate teaching and learning materials and inadequate furniture which were suggested to be affecting teaching and learning and hence yielded only a modest academic performance.

Nevertheless, in all, school feeding programme is an effective way to improved school enrolment, attendance and academic performance. Therefore, the government through the ministry of basic education should take a holistic view to solve problems of children who are both hungry and need education.

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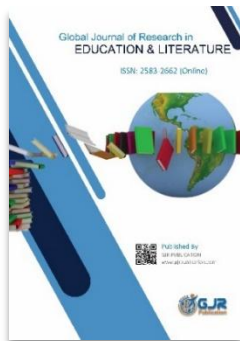
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