A review of the progress of school meal programs in the globe

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This paper focuses on the implications of school food programs in relation to school-aged children’s nutritional status and education performance. By comparing the literature produced in the developed world with those from the least developed countries, this article will, through its situational analysis, show the strengths and weaknesses of school food programs by highlighting three integrated issues: firstly, to analyze the vicious cycle of food shortage intake and education performance among poor school children; secondly, to analyze and compare two models of school food programs to show how school meals programs help in reducing the risk of school withdraw and improve the school child performance; and thirdly, to reconsider alternative policies, approaches and practices of school food programs that promote school child nutrition status and maintain better child education performance for poor undernourished children.

Key words: School meal program, pupils' nutrition status, pupils’ school performance.

INTRODUCTION

The importance of nutrition as a foundation for healthy intellectual development is underestimated. Poor nutrition leads to ill health, and ill health causes further deterioration in nutritional status. These effects are most dramatically observed in infants and young children, who bear the brunt of the onset of malnutrition and suffer the highest risk of disability and death associated with it. It was estimated, in 2001, that 50 to 70% of the burden of diarrheal diseases, measles, malaria, and lower respiratory infections was attributable to malnutrition (WHO, 2006). The major roots for all children diseases are associated with the vicious cycle of poverty and issues of food insecurity, food shortage, and poor and inadequate food intake. As all these factors are major foundations for underweight and malnutrition among children in many least developed nations around the world. In addition, 45-55% prevalence rates of underweight and stunted growth has indicated poor nutritional status among school-aged children (WHO, 2009; FAO, 2012). Furthermore, child malnutrition has become interrelated with poor nutritional intake during the first five years of life, and underweight and undernourished mothers, are expected to give birth to low weight children (Maternal malnutrition and inappropriate breastfeeding and incorrect feeding habits represent huge risks to the health and development of those children who survive (Isebol, 2010). Deficiencies in the diet of vitamin A, iodine, iron, and zinc are still widespread and are a common cause of excess morbidity and mortality, particularly among young children (Behrman, 1996; Grossman, 2009).

Over 50 million children are wasted, and in low-income countries one in every three children is stunted by the age of five years. Indeed, many children never reach this age. The effects of poor nutrition and stunting continue over the child’s life, contributing to poor school performance, reduced productivity, and other features of impaired intellectual and social development.

Nevertheless, in the developed rich countries, child malnutrition can even happen when food is available and secured. It is estimated about 10% of the school children are underweight and 32% are obese. Also, unhealthy diet and junk food intake during childhood and adolescence the risk of immediate nutrition related health problems of primary concern to school children, namely, anemia, obesity, dental caries and lack of physical activity

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(Childhood and adolescence are critical periods for health, development and well-being, where the physiological needs for nutrients increases and the consumption of a diet of high nutritional quality is particularly important. Eating habits, patterns of eating, lifestyle and behavior patterns are established during this period and have a significant influence on health and wellbeing. School pupils require an optimum meal during the school day. In many countries over the world school meals are offered, but the quality, quantity, cooking environment and, the cost may vary from one country to another and from a district to another within one country.

The paradigms that this paper will discuss are interrelated indicators in relation to school meal quality and the pupil's performance and withdraw rate. Specifically, the paper discusses the necessity of adequate and nutritive school meal programs, as well as the factors that influence the continuity, sustainability, success and/or failure of the school meal program management.

PARADIGME ONE

The vicious cycle of poverty, food security, food intake and child's school performance

In 1983, the FAO defined the goal of world food security as insurance “that all people at all times have both physical and economic access to the basic food they need” (FAO, 1992). Surely, hunger is a condition resulting from chronic under consumption of food and poor quality of diet intake that contributes to sever underweight and malnutrition among children. The level of school performance among 6 to 17 year old school-aged children have demonstrated the association between hunger, nutrition deprivation food insecurity, and nutrition outcomes. For example a study in Nepal found that the probability of attending school was 5% for stunted children versus 27% for children of normal nutritional status (WFP report, 2012) (Appendix 2), and in Ghana malnourished children entered school at a later age and completed fewer years of school than better nourished children (WHO and FAO, 2009). Furthermore, poor families tend to have insufficient/poor food/diet intake in quality and quantity and low consumption of vegetables, fruits, protein and fats among school children age that adversely affects school performance (Rose, 2000).

Food is the highest priority among poor households, and is related to family resources which demand almost all of their money and/or time. However, since the last decade, it has been noticed that food intake at household level is diminished. A study conducted in Jamaica at household level during the world financial crisis 2008/2009 food consumption were extremely reduced disturbing the family health condition and school child standard. The study identified that there is a direct and noticeable relationship between household income, enough food and safe drinking water (Hossain et al., 2005). Similarly, middle class families in many Arab countries tend to purchase a “thrifty food basket” during the economic crises hit the region (Ahmed and Hussein, 2009). Moreover, households seem to be worried about having enough money to pay for nutritive food, and securing adequate diets for their children as well as a worry that children go to school hungry. The consequence of this leads to chronic/mild under nutrition causing mental and physical changes which effect on learning, physical health and productivity in the future (Isebol, 2010).

Food insecurity is found as a significant predictor to less healthy diet intake, irregular meal intake per day and insufficient nutrition information in respect to cooking nutritive meals. The roots of food security and food consumption at the macro and micro levels usually lead to the discussion of availability of food and price at the market level; the purchasing ability of a family and the distribution of food between family members. In poor countries, such as the Sudan, India, Philippines, kitchen expenditure is a major portion of available income, where more than fifty percent of a household budget is spent on food commodities (Galloway, 2009; Grossman, 2009). These interrelated factors, including income level of a household as a determinate for food purchase, quality and quantity of the food, the process of cooking, and, hence the nutritional value intake help to measure and to identify the amount and the quality of food a school child eats. In contrast, in rich countries such as in the USA, Canada, and the Netherlands, people spend more money on services and non-food items, where 10.4, 13.7 and 14.4% of their income is spent on food respectively (Behrman, 1996).

Demographic racial and ethnic characteristics of households have been correlated with food quality. Several studies have compared African and Asian groups with American and European groups which found precise correlations between poverty, food security, food quality and nutrition status; positive correlation between age, race, food security and nutrition status (Kugelman and Hathaway, 2010). Also, poor families tend to have low serum nutrient levels, and school children aged 6-17 have systematic differences in diet between poor and non-poor families which indicated direct effect on school attainment.

Furthermore, social food habits concerning the quality of food intake and the distribution of food among family members are identified as factors that determine nutrition status of family members and their health condition (Senbajo et al, 2003). Still, in many societies food is
unequally distributed between family members based on gender, age, and power. It is a stereotype pattern of many rural families of the developing countries in which the father and adult males are eating the best in quality and amount of the food on the belief that they are working and they own the money, while women and children below ten years old remain on a little or a different food from the one served to males (Senbajo et al). In contrast, the standard typical nutrition status of rich to middle income families in developed countries, including the USA and Western Europe, finds an imbalance of poor dietary intake such as too much junk food, lack of little fruit and vegetable intake, and iron deficiency. Significant deficiencies in those nutrients not only have a direct negative effect on child weight and health, but also results in playing an essential, significant and immediate effect role in normal behavior, concentration and cognitive ability (Sorhaindo and Feinstein, 2006). In addition, deficiencies in zinc, iodine, iron and foliate have been found to significantly impair the cognitive development of school-aged children and have an impact on the development of the central nervous system, (Isobel, 2010; Bryan et al., 2004). Therefore, a poor diet leaves school children susceptible to illness through a poor immune system, greater illness results in more days absent and a decrease in school performance may affect educational outcomes (Figure 1).

Furthermore, social factors influence dietary intake, especially during adolescence, where eating habits, food choice and meal patterns are increasingly influenced by peer pressure. The various psychological, social and environmental factors that influence food preferences increases with age as children and adolescents are subject to an increasing array of developmental changes and influences outside the home (Kugelman and Hathway, 2010). Moreover, eating habits are strongly affected by cultural pressures. Many adolescents and children feel pressured into having an “ideal” body shape. The desire to be thin and the stigma of obesity may have a significant effect on body image and self-esteem in young people (WHO, 2004). This is in turn affects the physiological and cognitive abilities at school.

From the above scientific evidences, it is clear to see a strong link between child nutrition and learning in school, in which the availability of school meals programs, such as school breakfast, improves educational performance of children, including, child participation and academic performance (Harvard and Tufts Universities, 2000) (Appendix 3). In addition, in-school nutritive meal improves school attendance, students’ attention spans,
performance of tasks; and, fewer problems with irritability, anxiety and aggression. Therefore, it is an agreeable fact that good nutrition fosters children’s healthy growth and development and reduces the risk that children will become overweight or obese, or underweight.

**PARADIGM TWO**

**The comparison of school meal programs on pupils' educational performance**

According to the UN World Food Program, in developing countries almost 60 million children go to school hungry every day, about 40% of them are in Africa. In the poorest countries, school feeding programs are emerging as a common social safety net response to the crisis. In 2008, 20 governments looked to school feeding programs as a safety net response to protect the poorest. The UN World Food Program assisted some 22 million children with school feeding in 70 countries, and the World Bank Group launched a Global Food Crisis Response Facility that mobilized $1.2 billion to help countries respond to the food and fuel crises, including by scaling-up school feeding programs (WFP report, 2010).

School meals programs help in reducing the risk of school withdraw and improve the school child performance; however, major differences exist in the provision, composition, effective application and stability throughout school systems and according to the economic status of different countries. In this paradigm the history of various school meal programs is analyzed and compared according to economically rich, moderate, and poor countries.

Since 1920s Western Europe, including Finland, France, Sweden, the UK and Scotland had established a national school meal program in all primary and secondary schools, where schools must provide a hot lunch every day of the week. In other European countries, including Austria, Ireland and Norway, variations of this modicum of school meals program are taking place where individual schools choose whether to offer lunch or not. Yet others, such as Denmark, Greece, Germany and the Netherlands do not provide free school meal programs, or are in transitional phases; pupils have to bring packed lunch from home (WHO, 2006).

Finland’s unique system of free lunches in primary and secondary schools is a good model for Europe, where the reorganization of some school system, such as that in Germany, provides an opportunity for a new healthy approach to school meals, based on best practice examples from other European countries, including Finland (WHO, 2006). However and in spite of the lunches provided have to meet one third of the pupils’ daily nutritional requirements, school meal services in Finland do not always have a good reputation among pupils, parents or the public. The most common complaints are long queues, cramped and overcrowded dining areas, and the short time made available for meals in many schools (FAO, WFP, 2009). An unfriendly eating environment has major consequences of eating behavior, including an increase in plate waste overcrowded and noisy lunchrooms.

All public schools in the United Kingdom offer school lunches every day of the week, where approximately 45% of primary and secondary school pupils are provided with a meal for children nowadays more than in the past three decades, seem to rely more on food provided at school (Michele and Joanthan, 2009). In addition, school meals are part of a means-tested program; such that 18% of the pupil population from less privileged backgrounds is eligible to receive school meals for free. The effectiveness means-tested program found that school meals provide a direct way for policy-makers to possibly reduce disparities in diet between children from more and less privileged socioeconomic backgrounds, which in turn could contribute to reduce differences in educational outcomes (Michele, 2006). Furthermore, a new campaign, "Feed Me Right" aimed at introducing better menus that replaced the junk food and changing school menus into more nutritive quality meals with the purpose of improving the health conditions and increasing school performance. The campaign spread in the Greenwich Borough of England and involved new equipment for school kitchens and the retraining of the cooks. Acceptance of the new menus was gradual; however, the results were impressive: an increasing in school meal consumption, a drop of absenteeism by 80%, which in turn improved the overall health of the pupils and on education achievements (Michele and Joanthan, 2009).

The USA has been serving breakfast to school children across the nation since the pilot program began in 1966. Today, the School Breakfast Program (SBP), a federal and state reimbursement program for each breakfast served that meets federal requirements, has provided breakfast for more than 8.5 million children nationwide (Levinger, 1992). Children from families with incomes at or below 130% of the poverty level, children in families receiving Temporary Assistance for Needy Families (TANF) or children in families receiving food stamp benefits are eligible for free or reduced-price breakfasts, in fact, all SBP sponsors are required to offer free and reduced - price breakfasts to eligible children (Jamie Oliver, 2000). Despite the importance of good nutrition in the USA, more than 8 in 10 U.S. children do not have healthy diets: their nutrition is inadequate for optimal physical and emotional development. Many children do not eat enough fruits and vegetables and eat a lot of high calorie foods which have insufficient amounts of vitamins, minerals, and, protein. For instance, Figlio and Winicki
(2005), using disaggregate data from schools in the state of Virginia, sought to reveal the importance of the nutritional content of school lunches in relation to educational performance and proficiency. They found that those schools that are most at risk of receiving a sanction for not meeting the proficiency goal, increase the number of calories of school lunches on exam days. This strategy seems to be somewhat effective, with significant improvements in test scores in mathematics and to a lesser extent in History/Social Sciences. However, they argue that these changes are targeted at immediate and short-lived improvements in performance, based on an increase of the number of calories and glucose intake, rather than a long-term strategy aimed at providing a healthy and balanced diet for children.

While in the African continent, many children are underweight (55% in Ethiopia and 60% in Somalia), where there is evidence to suggest that children do not take enough balanced food increasing the risk of refusal to go to school due to their weak body, less concentration in class and lose of interest to education (FAO, 2010).

The Kenyan school food program started in 1980 for most of the urban schools and by 1995 a national policy articulated that school meals are compulsory in all primary schools in Kenya. In 2003 both the WFP and the Ministry of Education (MoE) collaborated in an effective program aiming at expansion and refinement of the food programs in rural schools in particular (Langinger, 2011). In addition, the program considered the issue of absenteeism as major factor attributed to lack or bad quality of food meal and the school environment. Hence the Kenya’s collaborative school food program is based on the provision of free meals to many rural community schools. The meal offers 700 Kcal which is suitable for a child daily allowance at school day. The impact of the program is positive in which attendance rate has increased and school drop-out has decreased (Espejo, 2009). Other noticeable impacts include a gain in weight and height, improve immunity to illness, and, increase school enrolment from 77 to 92%. Moreover, mothers were able to maintain their domestic chores and save time to engage in income generating activity.

A recent evaluation of an on-going school feeding program in Burkina Faso found that school canteens were associated with increased school enrollment, regular attendance, consistently lower repeater rates, lower dropout rates in disadvantaged provinces, and higher success rates on national exams, especially among girls. A small pilot school feeding program in Malawi was evaluated for its effect on enrollment and attendance. Over a three month period there was a 5% increase in enrollment and up to 36% improvement in attendance/absenteeism compared to control schools over the same period (WFP, 2000).

The UN-WHO and UNICEF documented that the ideally best food needed for young children and for a school child age that prevent them from illness and vulnerability to malnutrition risk, and, hence, at school maintain good concentration and performance. A standardized recommended dietary daily allowance (RDA) was adjusted for children from developing countries where the average per capita annual income varies between 3,000-750 US Dollars (WHO, 2007).

In Pakistan, for instance, feeding programs of any kind are expensive; their model is based on motivating the families and communities that lack the resources to adequately provide for their school-age children. Cost alone is not the major issue for both governments and donors and can indicate little about the value of a SFP, but costs relative to impact on nutrition and education outcome, are for the most part required. The potential to draw on available public resources is coupled with a built-in tendency toward universal coverage providing meals for all schoolchildren. Program coverage and targeting is always subject to a series of logistical, technical and informational constraints. In view of the fact that resources are finite, particularly in Pakistan targeting is a critical element of any effort to improve the impact of a SFP on education. Furthermore, SFP is an integrated program with other interventions that address the primary nutrition and health problems of the school-age population micronutrient fortification or supplementation, and health nutrition and hygiene education (Bedridden et al, 2008).

**PARADIGM THREE**

**School food programs approaches and practices re-evaluation**

Policies and action researches on these issues have been progressing, but the implications are still not optimistic. Many social policies and educational strategies have been articulated for integrating the school food program, as mainstreaming projects, in all primary schools in order to enrich the nutrition status of children and to secure pupils’ education and continuity (Salma, 2009; WHO and UNICEF, 2010).

As such, many United Nations Organizations (WFP, UNICEF, WHO, UNHCR) as well as international and charity organizations (CARE, OXFAM, Red Cross), as well as local and national organizations and government efforts have devoted some contributions to school food programs and support school food programs at national level. However, the success and effectiveness of these programs vary from one country to another and from a school in another depending on the policies and resources granted.

The factors that influence the continuity, sustainability,
success and/or failure of the school meal program management and responsibility needs to be reconsidered in order to promote the school child nutrition status and maintain better child education performance for poor undernourished children. Policy analysis shows that the effectiveness and sustainability of school feeding programs are based upon embedding the programs within the education sector policy. The value of school feeding as a safety net and the motivation of the education sector to implement the programs are both enhanced by the extent to which there are educational benefits. Donors and development partners have a significant role to play in supporting the poorest countries with both funding and technical support to ensure costs are contained, affordable and sustainable.

Since 1965 the leading UN organization's stakeholders that are concerned with school meal programs are mainly the WFP, UNICEF, WHO. In 2011 the World Food Program reaches over twenty-three million school children in 65 countries (Appendix 1), however, still about 69 million children worldwide attends school hungry (WFP report, 2012). The main overall goals of the program are to improve nutritional status of school pupils, enforce school attendance, improve pupils' educational performance, reduce school drop-out rates, and, enhance social relations between all stakeholders of the school.

The WFP offers two types of food programs: one is an in-school meal program consisting of breakfast or lunch or both at school time, and a fortified snack. The other consists of a take-home ration, distributed to the neediest children, such as orphans, extremely underweight, or poorest families. The strategic aim of food preparation is to enhance community participation and to utilize available local resources. For example, small farmers are assisted with seeds and other inputs to grow vegetables, legumes and fruits for school meals. Also, school gardens are encouraged in which teachers and school guards, cooks are involved in food production process.

Moreover, the sustainability of school feeding programs is a priority policy of WFP in many countries that have supported WFP project. The assessment of a few countries found three main findings. First, school feeding programs in low income countries exhibit large variation in cost, with concomitant opportunities for cost containment. Second, as countries get richer, school feeding costs become a much smaller proportion of the investment in education.

Studies show that school feeding becomes more affordable as countries develop, in Ireland it is only 10%. In countries with a low GDP per capita, a school feeding program typically costs half or more of their education budget; in Zambia the cost of school feeding is about 50% of annual per capita costs of primary education. Given a finite budget, targeting is essential to ensure that programs provide the most benefit to the intended beneficiaries. Therefore, it is crucial during program design, to carefully assess the costs, benefits and tradeoffs and plan realistically to ensure costs are contained and the programs expand gradually. This means different approaches might be applied considering the available resources, the situation, the severity case of the beneficiaries, and, the commitments of the program executers.

In 1995 the World Health Organization's Global School Health Initiative was launched with the mandate to use schools as a means of strengthening health promotion and education activities at local, national, regional and global levels - thereby improving the health of students, families and all members of the community (WHO, 2006). The basic policy of the WHO school food and nutrition program is holistic and consists of four key elements: school curriculum, school environment, school nutrition and health services, and, school community. The underlying aim of a school food and nutrition policy is to ensure that messages promoted throughout the school system are correct, consistent and mutually reinforcing. Schools need to teach healthy living and assist pupils in implementing their knowledge by creating an environment where healthy choices are feasible. Early in 2009 both WFP and the World Bank were collaborating in assessing the importance and impact of school feeding programs. The basic reflection of the assessment found that the school feeding programs relatively scale up the benefit per household by more than 10% of the household expenditures. In the poorest countries, where school enrolment is low, school feeding may not reach the poorest people; alternative safety net options are often quite limited. In these settings well-designed geographically targeted expansion of school feeding programs can be aimed moderately accurately to provide somewhat more progressive outcomes.

The Food and Agriculture Organization has recognized that world food security is becoming less a problem of global supplies, overall stability and global stock levels as such, and more a problem of inadequate access to food supplies for vulnerable groups within a country, caused by lack of purchasing power (FAO, 2010).

Main preconditions for the transition to sustainable national programs are mainstreaming school feeding in national policies and plans, especially education sector plans; identifying national sources of financing; and expanding national implementation capacity. For example a well-designed school feeding programs can provide nutritional benefits and should complement and not compete with nutrition programs for younger children, such as the inclusion of micronutrient fortification in vitamin B has been related to behavioral problems; particularly, aggressive behavior and changes in personality. It is noticed that healthy school meals could generate positive externalities on all children, through
their positive effect on behavior in the classroom, as well as school inclusion due to obesity (Levinger; Behrman).

In conclusion, it would seem that school meal program policies, activities, features, budgets, attempts of implementing and efforts inserted by stakeholders vary in different continents, between regions and among countries. What follows are seven basic alternative strategies and recommendations to assist in formulating policy to further improve the planning and implementation of school meal programs with a view of enhancing the sustainability within poorer nations of the world. These are:

1. Participatory and bottom-up approaches in consensus building: firstly, this should include the commitment of all stakeholders, including the policy-makers, particularly the school administration and the Ministry of Education, the participation of the school community, including the school council, and the school-parents council. Secondly, the effective measures on policies and objectives that focus on providing, improving, and sustaining school food programs that effectively contribute to meeting the nutrition and health needs of school-age children and education performance.

2. Correct the bad social food habits and food style and practices of most societies that prefer junk food, or one single food item all through life.

3. Develop a built-in targeting mechanism and criteria that concentrate program resources for high risk children and communities, whereby the handling and distribution of the meal to the poorest school children are reached. This is essential if the program is aiming to reach families and communities that need to be motivated to take their children to school and to have them attend more regularly.

4. Analyze and identify alternative financing and cost options for SFPs and the cost of the meal, where the cost of school feeding programs is expensive and for many out of reach. Financing may include international assistance, UN organizations, charitable agencies, and cost-effectiveness analyses, assessing cost-saving strategies.

5. Establish appropriate guidelines to assess the implementation of different kinds of SFPs. This includes, information required for the composition of the meal and its nutritional value and quality, the timing of school meals, the conditions in the education sector, such as levels of school enrolment, attendance, and performance. Also, it is necessary to consider the availability of facilities and resources, to examine the perceptions of program managers and policy makers need to analyze the nutrition and health needs of school-age children as well as the community’s capacity to participate in school feeding programs.

6. Integrate feeding programs with other interventions that address the primary nutrition and health problems of the school-age population. The past decade has demonstrated the added value of integrating nutrition and health interventions with school meals. Specifically recommended are deworming, micronutrient fortification or supplementation, and health nutrition and hygiene education. These interventions are implemented in many countries through donors' projects.

7. Identify and address any potential bottlenecks in the implementation: such as the availability of supplies and other resources, the appropriateness of the cooking environment and hygiene, and, cooking practices and the management of private sector inputs. However, once school feeding programs are in place, altering them may meet strong resistance. Hence, school management needs to allocate new resources and engage in the new experience, re-assess, re-feeding the experience, and put final judgment. Therefore, a critical step towards an effective, better program is to thoroughly analyze this on-going experience.

8. Develop monitoring systems that focus on program processes, to establish the functionality of a program, and institute an evaluation system to assess the impact of the program on specific outcomes. The need to monitor and evaluate programs is not unique to SFPs, but this recommendation is critical to increasing the impact of SFPs.

It is clear that implementation of these seven recommendations is crucial as one package. However, training of school management staff should be part of the policy-strategic program design and implementation. Capacity building of the school staff and those responsible of the school meals is the key to sustainability.

CONCLUSION

All evidences show that good nutrition fosters mental, social and physical well-being, contributing to increase self-esteem and positive body image. Also, adequate nutritive food intake maintains better and safe aging life. Accordingly, most of the countries world-wide are supporting school meals as part of the education policy that follows the MDGs goals. However, despite the evidence and studies mentioned in the paradigms above, still there are lots of limitations and threats facing the success of the school meals programs. The most crucial threats and challenges, in many of the developing countries, are associated with education policies and projects planning management; lack of food resources; cooking environment; and, poor capacity building facilities. While, in developed countries, the quality of food is poorly controlled; food habitual style; the majority of children and adolescent prefer junk foods; still in many
schools the meal is expensive for some families such as single-parent family, the refugees and the asylum families.

Some questions may be raised here: how should the planners and policy makers promote for the recognition of the cost effective nutritive and hygienic school meals? Is the era of globalization will influence on the cost and the nutritive value of the school meals, and, hence on their decisions? In other words, will they accept to having a cheap meal with a less nutritive value? However, I do ask the academician to recognize clearly this issue and to rethink again for a way out.

Finally, should all the lessons learned from school meals, open venues for better experiences in other countries which still have not introduced such meals at school? Or should the existing experiences discourage these countries from starting school meals?

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Appendix 1
Basic Facts
i) There are 66 million primary school-age children who attend classes hungry across the developing world, with 23 million in Africa alone.
ii) There are 67 million school-age children who do not attend school. Poor households must often choose between sending their children to school or to work in the fields.
iii) A daily school meal provides a strong incentive to send children to school and keep them there and allows the children to focus on their studies, rather than their stomachs.
iv) Just US$0.25 will fill a cup with porridge, rice or beans and give a monthly ration to take home. With US$50 a child can be fed for an entire school year.

Appendix 2
WFP's Vision
i) No child should attend school hungry. This is the goal WFP has set itself for 2015. WFP is working with its government partners, NGOs and donors to achieve this goal.
ii) WFP calculates that US$3.2 billion is needed per year to reach all 66 million hungry school-age children. Of this, US$1.2 billion would allow WFP to reach 23 million children in Africa.
iii) WFP has developed strategies with over 32 governments to allow them to continue WFP funded program as well as to create and run their own school meal program.
iv) In 2011, WFP provided school meals to 25.9 million children in 60 countries.
v) In 2011, WFP also provided take-home rations to 2 million girls and 0.8 million boys.
v) In 2012, 37 countries cover 10.9 million children.

Appendix 3
What Are School Meals?
i) In-school meals: Children are fed breakfast, lunch or both in school. Meals can be prepared at the school, in the community or be delivered from centralized kitchens. Some programs provide complete meals, others provide high energy biscuits or snacks.
ii) Take-home rations: Entire families receive food provided their children attend school regularly. Like conditional cash transfers, the rations’ value compensates for the costs of sending the child to school. For particularly vulnerable students, such as girls or
orphans, in-school meals can be combined with take-home rations for greater impact.

iii) As far as possible, food is procured locally in developing countries, which in turn benefits local development efforts and small farmers.

**Why School Meals?**

i) **Nutrition:** When combined with de-worming and micronutrient fortification school meals offer important nutritional benefits.

ii) **Social Protection:** School meals can break the cycle of hunger, poverty and child exploitation in the world’s poorest areas. They can also reach children affected by HIV/AIDS, orphans, the disabled and former child soldiers.

iii) **Education:** School meals encourage poor households to send children to school and keep them there. Programs often target girls, enabling them to gain an education, even in societies that traditionally exclude them from schooling.

iv) **Supplementary benefits:** Schools are the Centre of many villages and communities. School meals connect teachers, parents, cooks, children, farmers, and the local market.