

**THE IMPACT OF SCHOOL FEEDING PROGRAMME ON ACADEMIC
PERFORMANCE OF PRIMARY SCHOOL PUPILS IN
MARAFI DIVISION, MAGARINI DISTRICT,
KENYA.**

**BY
MWAROGO THOYA MAITHA
BED/18522/71/DF**

**A RESEARCH PROJECT SUBMITTED TO THE INSTITUTE OF OPEN
AND DISTANCE LEARNING IN PARTIAL FULFILMENT OF THE
REQUIREMENT FOR AWARD OF A BACHELOR IN
EDUCATION IN EARLY CHILDHOOD AND PRIMARY
EDUCATION (ECPE) OF KAMPALA
INTERNATIONAL
UNIVERSITY**

APRIL,2010

DECLARATION:

I, **MWAROGO THOYA MAITHA**, declare that this research project is my original work and has never been submitted to any academic award. Where the works of others have been cited acknowledgment has been made.

Signature.....

MWAROGO THOYA MAITHA

Date.....17-04-2010 .

60/100

APPROVAL

I certify that the work submitted by this candidate was under my supervision. His work is ready for submission, to be evaluated for the award of a Bachelor of Education in Early Childhood and primary Education of Kampala International University.

Signature.....

Mrs. Deborah Taligoola

Date.....17/04/10.....

DEDICATION

This research project is dedicated to my mother Kache Maitha, wife Prisca Hariri and my children Nuru and Johari thank you for giving me humbly time for my studies and the research project.

ACKNOWLEDGEMENT

Special thanks go to the almighty God for seeing me through my research work and for being with me in the course of my studies.

I would like to thank my supervisor Mrs. Deborah Taligoola for her support and guidance when writing this research project. I would also like to acknowledge my colleagues like Amuma .A Kuyaa, David. S. Mwanyamba and E. D. Ngala who without their support would have been particularly difficult.

TABLE OF CONTENTS

DECLARATION:.....	II
APPROVAL	III
DEDICATION.....	iv
ACKNOWLEDGEMENT	v
TABLE OF CONTENTS	VI
ABSTRACT	VIII
 CHAPTER ONE	 1
INTRODUCTION	1
1.1 Background of the study.....	1
1.2 Statement of the Problem.....	1
1.3 Objective of the Study	2
1.3.1 General Objective	2
1.3.2 Specific Objective.....	2
1.3 Research questions.....	2
1.5 Significance of the study	2
1.5 Scope of the study.....	3
1.6 Limitations of the study	3
 CHAPTER THREE	 10
METHODOLOGY	10
3.0 INTRODUCTION	10
3.1 Research design	10
3.2 Population of study	10
3.3 study sample	10
3.4 Research instruments	10
3.5 Research procedure.....	10
3.6 Data analysis and interpretation.....	11

CHAPTER FOUR.....	19
DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS	12
4.0 Introduction.....	12
4.1 Profile of the respondents	12
4.2. Is there a relationship between school feeding and performance of pupils?	13
4.4 Socio- economic factors and school achievement	14
CHAPTER FIVE	18
SUMMARY, CONCLUSION AND RECOMMENDATIONS.....	18
5.0. Introduction.....	18
5.1. Summary.....	18
5.2. Conclusion.....	19
5.3. Recommendations.....	19
5.4 Suggestions for further research	20
REFERENCE.....	28
APPENDIX I	26
QUESTIONNAIRE FOR TEACHERS.....	26

ABSTRACT

This study was intended to determine the effect of free feeding programme on the performance of pupils in primary school in Magarini District, between April and August 2009. All secondary source of literature related to this study were made of use.

The study adopted a descriptive research design which enhanced the researcher to obtain a better understanding of the problem of socio-economic factors on academic performance of pupils. Questionnaires and interview guides were used in the collection of data after which it had to be coded and presented in percentages and frequency distribution tables.

The findings revealed that poor nutrition led to diseases and therefore because of diseases children do not perform well in school. The study also found out that nutrition was very important and that for a country to develop it had to focus on nutritional programs.

It was recommended that the parents and the community should be sensitized on the importance proper and stable family background and how they influence child development.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The benefits of education on economic growth and its contribution to increased productivity have been demonstrated. Investments in human capital, particularly in education, are more conducive to economic growth than investments in physical capital. Both society at large and individuals benefit from basic education.

Basic education, especially for women and girls, is thus among the most effective investments that governments and donors can make to improve the physical, social and economic conditions of the poor. For example, a study by the International Food Policy Research Institute concluded in February 2000 that women's education and their resulting higher status "have contributed to more than half of the 1970-95 reduction in the prevalence of malnutrition in developing countries".

In developing countries the returns on investments in education are higher than in more advanced countries; the greatest returns are for primary schools. Even the developed world has taken advantage of school feeding. Many countries have had or continue to run nationwide or targeted school feeding projects. Japan and the US are among these examples as well as numerous European countries.

1.2 Statement of the Problem

Providing a nutritious breakfast or lunch to children at school can help solve hunger and improve learning. When children no longer need to worry about food, they can concentrate on their lessons. With enough food to learn and thrive, they are more likely to stay in school longer. When food is available at school, attendance rates increase significantly. Parents are more inclined to send their children because they know their children will get at least one solid meal during the day, and it will add savings to the family budget.

In emergencies or protracted relief operations, school feeding (even in "makeshift" schools) is extremely important in several ways. Firstly, the feeding is a critical source of nutrition for children.

Secondly, the school provides a healthier emotional environment for children whose normal lives have been disrupted; and allows schooling to continue during a period when precious school time would otherwise be lost, handicapping the child in the future. It's on this premise that the researcher sought to establish whether free feeding has any impact on academic performance of pupils.

1.3 Objective of the Study

1.3.1 General Objective

The general objective of this research was to identify the effect of free feeding programme on the performance of pupils in Diff primary school in Magarini District, Kenya.

1.3.2 Specific Objective

Through the production and dissemination of this research, the aim was to:

- 1) To investigate the impact of feeding programs on pupils academic performance.
- 2) To investigate the challenges faced by children who cannot access food.
- 3) To determine the possible solutions that are available to help in feeding programme.

1.3 Research questions

- 1) What is the impact of feeding programmes on pupil's academic performance?
- 2) Which challenges are encountered school children who cannot access food?
- 3) Are there any possible solutions to the challenges?

1.5 Significance of the study

The researcher was able to get first hand information on the effects of poverty on early childhood education.

The schools in Magarini district benefited from the research as it helped the administration to know how best to handle pupils from different backgrounds.

The research will be of great help to other students in the Institute of Open and Distance learning who might wish to enhance the same later.

1.5 Scope of the study

The research was carried out between April and August 2009. The research was conducted in Magarini district, Kenya. The respondents to the research were pupils as well as the teachers and parents of Diff primary school.

1.6 Limitations of the study

In conducting this study, a number of challenges were encountered, including:

Attitudes Towards the Exercise – Some respondents were unwilling to freely share the information. This maybe mainly true at the local level because of fear of not knowing whether the information could go to their superiors with repercussions. Nevertheless, the researcher tried and overcame these limitations to collect sufficient and representative data to reach the conclusions herein.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section reviews the literature on the impacts of school feeding programs on school Enrollment, attendance, and dropout rates; dietary intake; nutritional status; and academic performance of participating children.

2.2 The impact of feeding programme on performance

A study conducted in Malawi by WFP showed that a small, pilot, school feeding program over a three-month period led to a 5 percent increase in enrollment and up to 36 percent improvement in attendance (WFP 1996). An evaluation of a school meal program in Jamaica found that after the first semester, the treatment class showed improved school attendance compared to the control classes (Powell, and Grantham-McGregor 1983). Another evaluation of a 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, and higher success rates on national exams, especially among girls (Moore, and Kunze 1994). However, in a study conducted in Kenya, the investigators did not find a difference in the attendance rates between schools with and without the school feeding program (Meme et al. 1998).

School feeding programs have also proven effective in reducing the education gap between girls and boys. For example, program evaluation results from Pakistan, Morocco, Niger and Cameroon show that while food is the initial motivation for sending girls to school, parents of participating girls develop an interest in the education of their daughters. This change in attitudes is an important factor in enhancing parents' commitment to education beyond the duration of food assistance (WFP 2002a).

School feeding programs are likely to improve the nutrient intake of participating children. A study in Huaraz, Peru shows that for children who received breakfast at schools, dietary intake of energy increased by 2 percent, protein by 28 percent, and iron by 4 percent compared to the control group (Jacoby et al. 1996). An evaluation of a school feeding

program in Jamaica assessed the dietary impact of school breakfast consisting of a bun and half pint of milk.

Results show that the program provided 32 percent and 45 percent of daily energy and protein requirements, respectively (Chambers 1991). In Brazil, a study of a large school lunch program examined the impact of the program on consumption of calories and protein by school children in Sao Paulo. Participation in the program was associated with an increased availability of 357 calories and 8.5 grams of protein (Dall'Acqua 1991).

A very few studies meticulously measured whether food intake from a school feeding program is additional to the child's normal food intake at home, or the food is substituted away from the child at home. Jacoby (2002) explores the existence of an "intra-household flypaper effect" by which in-school intake of calories from SF snacks and meals "stick" to the child.

Based on an experimental design and rigorous econometric analysis, the study assessed the impact of an SF program on child calorie intake in the Philippines. The empirical results confirm the existence of an intra-household flypaper effect, where virtually all calories from SF food remain with the participating child. In other words, there is no evidence of intra household reallocation of calories in response to feeding program.

Iron and iodine are critical for cognitive development. Iron deficiencies may render children inattentive and uninterested in learning. Iron supplementation was shown to improve IQ scores of previously iron deficient children (Seshadri and Gopaldas 1989). Evidence also shows that children who suffer from iodine deficiencies are more likely to perform poorly than those without (del Rosso 1999). To counter the harmful effects of micronutrient malnutrition, some school feeding programs provide fortified food. The provision of such food was shown to increase the dietary intake of micronutrients. For example, in Peru, researchers studied the effect of a breakfast program that included iron-fortified rations. The program significantly increased dietary intakes of iron by 46 percent, besides increasing energy and protein by 25 percent and 28 percent, respectively (Jacoby et al. 1996).

Evidence on the impact of school feeding programs on child nutritional status is limited, due partly to the cost and complexity of obtaining accurate and reliable anthropometric and food intake data, and partly to methodological difficulties in isolating the effect of food intake from other factors affecting nutritional status.

Several studies show that food alone does not guarantee improved nutritional status. For example, a study in Ethiopia found that differences in food availability and access had limited effect on the differences observed in child nutritional status (Pelletier et al. 1995). This could be because a child's nutritional status is a function of not only the quality and quantity of the dietary intake but also a function of morbidity, child caring and feeding practices, and household variables such as income and parental education. Further, in developing countries, poor health status of children is exacerbated by poor and inadequate: health facilities and services, immunization, safe water and sanitation, and health education programs. Some reviews even show that food-based interventions alone have little measurable impact on nutritional status, morbidity or mortality levels except in crisis situations (Clay, and Stokke 2000).

Nevertheless, there is evidence from school feeding program evaluations that some programs do improve children's nutritional status. For example, a randomized, controlled trial of giving breakfast to undernourished versus adequately nourished children studied in Jamaica showed positive results: compared to the control group, both height and weight improved significantly in the breakfast group (Powell et al. 1998).

In most developing countries, academic achievement is disappointing, especially at the primary education level. There are numerous causes for this problem, which can be addressed in several ways through both supply-side and demand-side interventions. Health and nutrition inputs have often been included in the strategies because poor health and nutrition are known to affect children's ability to learn. Children who have poor levels of academic attainment often have poor nutritional status (Pollit 1990; Simeon, and Grantham-McGregor 1989). It is then likely that giving children a daily breakfast or a meal at school may improve their scholastic achievement through several mechanisms: increasing the time spent in school, improving certain cognitive functions and attention to tasks and, perhaps indirectly, improving nutritional status (Grantham-McGregor, Chang, and Walker 1998). However, it is hard to infer a causal relationship since other confounding factors are also likely to affect learning. For example, poor social backgrounds and low socio-economic household characteristics are often linked to both poor diet and poor school performance (Chandler et al. 1995).

Evaluations to determine the impact of school feeding programs on academic achievement are sparse and most of them lack scientific rigor. Only a few investigators have examined the effects of school meals on school achievement levels, using quasi-experimental designs with matched treatment and control groups. Even such evaluations did not show consistent results. The inconsistencies may be because of the limited degree of control over experimental conditions, the differences in the analytical approaches and the initial characteristics of the children (Simeon, and Grantham-McGregor 1989).

One of the first papers that reviewed the impact of feeding children in school on education outcomes appeared in 1978 (Pollit et al. 1978). The authors looked at the U.S. school feeding programs and noted that most of the earlier studies had lacked well-defined hypotheses, were ambiguous in the definition of variables and lacked valid and reliable data. The authors concluded that provision of breakfast seemed to benefit students emotionally and enhance their performance on school-type tasks but no conclusion could be drawn upon the long-term effects. Pollit (1995) reviewed several studies conducted in Chile, United Kingdom and the United States from 1978 to 1995. The author concluded that brain function is sensitive to short-term variations in the availability of nutrient supplies. Such indication is particularly strong for undernourished children. For these children, omitting breakfast alters brain function, particularly in the speed and accuracy of information retrieval in working memory. This evidence has strong implications for the developing world where a large percentage of school children are nutritionally at-risk.

Three rigorous studies conducted in Jamaica that investigated the impact of school feeding programs on cognitive functions and learning outcomes provide evidence of the Beneficial impact of FFE on cognitive outcomes.

First, a study in 1983 examined 115 children aged 12 to 13 years who were enrolled in three classes in a poor rural area school. One class was served school breakfast with the other two classes serving as controls. The impact evaluation included: school achievement, attendance, and weight gain. School achievement was measured using tests that included arithmetic, spelling and reading. Children were followed over two semesters. After the first semester, the treatment group showed improved school attendance and arithmetic scores compared to the control classes, but no difference in weight gain. After controlling for school attendance, academic improvement remained significant showing some evidence that reducing hunger during school hours could affect learning of arithmetic (Powell and Grantham-McGregor 1983).

The second study examined the effect of breakfast on cognitive functions among 90 children aged 9-10 years with different nutritional status. The study examined the effects of omitting breakfast on the cognitive functions of three groups of children: stunted, non-stunted control, and previously severely malnourished. Using a crossover design, the investigators tested each child on two mornings one week apart (where the first week the child had received breakfast and the second had not). In order to have greater control over the experiment, children's meals on the previous evening were standardized and children subsequently fasted until they received the treatment breakfast or the placebo. Fluency and digit span tests were conducted and results showed that there was a detrimental effect of missing breakfast.

Results also indicated that cognitive functions were more vulnerable in poorly nourished children (Simeon, and Grantham-McGregor 1989).

The third study conducted in Jamaica investigated the short-term effects of giving breakfast on cognitive performance in primary school children who were mildly undernourished as compared with adequately nourished children. The experiment took place in four primary schools in rural Jamaica. Children were randomly assigned to a group provided with breakfast or a quarter of an orange as a placebo. Researchers then administered four cognitive tests (visual search, digit span, verbal fluency and speed-of-information-processing tests). After a few weeks the treatments were reversed and the tests repeated. Undernourished children's performance improved significantly on a test of verbal fluency when they received breakfast. Adequately nourished children did not experience any significant improvement (Chandler et al. 1995).

These and the findings of Simeon and Grantham-McGregor (1989) indicate that targeting of school meals to undernourished children should achieve greater impact in terms of improving children's cognitive ability.

However, results from a study in Chile did not find omission of school breakfast to be detrimental to cognitive performance (Lopez et al. 1993). This research examined 279 children from low socioeconomic backgrounds and categorized as normal, wasted or stunted.

No consistent association was found between school breakfast and performance in short-term visual memory, problem solving, or attention tasks in any of the three nutritional groups. Results suggested that, given a motivating short-term task and maintaining routine conditions, missing breakfast does not affect the cognitive performance of children. However,

the researchers had no control over the food intake the night before the experiment as children stayed at home.

Besides studies based on experimental design, some studies have examined school feeding programs directly to determine the impact on academic performance. In 22 out of 30 provinces in Burkina Faso, the success rate on a national exam for sixth grade pupils was higher for schools that had school feeding programs (Moore and Kunze 1994). Other studies of the determinants of academic achievement in Benin, Burkina Faso and Togo found that a school meal was positively related to children's performance on year-end tests. In Benin, children in schools with canteens scored 5 points higher on second-grade tests than did children in schools without canteens (WFP 2001).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This section entails the methods used to collect the data necessary to answer the research. It is divided into;

3.1 Research design

The study adopted a descriptive research design. This enhanced the researcher to obtain a better understanding of the problem of socio-economic factors on academic performance of pupils. The method chosen allowed a collection of comprehensive intensive data and provide an in-depth study on why past initiatives have not produced the desired results.

3.2 Population of study

The population of study were teachers, pupils of Diff primary schools. The research was carried out in Magarini district, Kenya.

3.3 study sample

With regard to above the study s stratified sampling was employed

Sampling as follows:50 pupils and 10 Teachers.

3.4 Research instruments

Questionnaire

Primary data was collected by use of questionnaire and interviews, filled by relevant parties to obtain ideas on what constitutes teaching methodology.

These were designed in both open and closed ended form.

The method ensured a high proportion of responses and higher returns rate.

Interview method

This took face-to-face interactions with the teachers in the school.

Secondary data was obtained from the Ministry of Education magazines, annual report records and other researches done. This gave other information required in the research.

3.5 Research procedure

The researcher had an introductory letter from the University and presented it to the area authority to obtain permission for study. This gave directives to the local administrators at

grass root level for acceptance. After acceptance by the authorities the major task of collecting data began immediately.

3.6 Data analysis and interpretation

The information collected was analyzed and edited to create consistency and completeness. After collecting the questionnaires they were edited for completeness and consistency across the respondents to locate omissions. Information obtained from the research study was presented and analyzed using bar charts, narratives, and statistical figures. That is:-

Descriptive statistics: This was used to measure central tendency, variability and relationship between variables. It included proportions, mean scores and percentage.

Summary statistics: These were used in the presentation of analysis. It included use of mean & percentages, summarized tabulations and frequency distribution.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

4.0 Introduction

The chapter is a presentation; interpretation and discussion of the findings. The results are presented in form of tables and frequency counts and percentage.

4.1 Profile of the respondents

Table 1: Shows the profile of the respondents.

Respondents	Frequency	Percentage
Sex		
Male	11	55
Female	9	45
Total	20	100
Marital status		
Single	8	40
Married	12	60
Total	20	100
Age		
19-24 yrs	4	20
25-30yrs	10	50
31 and above	6	30
Educational level		
Certificate	6	30
Diploma	9	45
Degree	5	25
Total	20	100

Source: field data (2009)

Twenty five (25) questionnaires were distributed to the teachers and 20 were filled and returned .This therefore represents 80% of the total number of questionnaires that were distributed.

The study covered 20 randomly selected teachers of whom 11 (55%) were male and 9 (45%) were female. Of the 20 respondents, 8 (40%) were single while 12 (60%) were married. The age category of the respondents was divided in three groups that is 19-24 years were 4 which was 20%, 25-30 were 10 (50%) and 31 and above were 6 representing (30%) of the respondents. The academic level of the respondents was divided in three categories that is certificate, diploma and degree. 6 (30%) of the respondents had certificates, 9 (45%) had diplomas and 5 (25%) had degrees.

Interviews were carried out with 10 parents both male and female. Six 6 of the parents were male while four 4 were female.

Focus group discussions were used to extract data from the pupils. 25 pupils were included in the discussion of which 14 were boys and 11 girls.

4.2. Is there a relationship between school feeding and performance of pupils?

The respondents were asked whether environmental factors affect academic performance.

Table 2: Whether free feeding programme has an effect on enrollment

Response	Frequency	Percentage
Yes	13	65
No	7	35
Total	20	100

Source: primary data (2009)

Majority of the respondents said that free feeding programmes had impacted on attendance and increased the enrollment of pupils. Those who were sure that they will eat at school were determined to join.

35% of the respondents said that free feeding programme did not affect the enrollment of pupils in any schools.

Table 3 Response on enrolment of pupils

Response	Frequency	Percentage
Strongly agree	10	50
Agree	5	25
Strongly disagree	1	5
Disagree	4	20
Total	20	100

10 (50%) of the respondents strongly agree that some tribes are well educated than others, 5 (25%) agree while 1 (5%) strongly disagree and 4 (20%) disagree.

4.4 Socio- economic factors and school achievement

The respondents were asked whether other socio-economic factors were impacting on performance of pupils in class and this was their response.

Table 4 whether socio-economic factors are major contributors of poor performance in schools.

Response	Frequency	Percentage
Strongly agree	10	50
Agree	8	40
Strongly disagree	-	-
Disagree	2	10
Total	20	100

Source: primary data (2009)

10 (50%) of the respondents strongly agree that poor nutrition leads to poor performance of pupils in class while 8(40%) agree and 2 (10%) disagree. The parents agreed that socio-

economic factors contributed to academic performance because children who are healthy are capable to concentrate in class which leads to performing well.

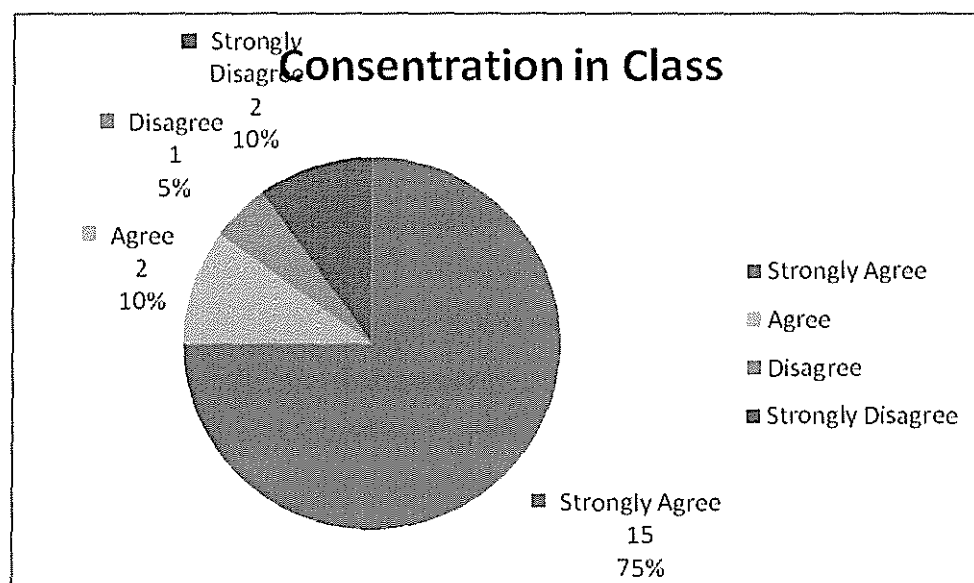
The respondents were asked whether children affected by socio-economic factors do not concentrate in class and this was their response

Table 5 whether hunger affects the concentration of pupils in schools

Respondents	Frequency	Percentage
Strongly agree	15	75
Agree	2	10
Strongly disagree	1	5
Disagree	2	10
Total	20	100

Source: primary data (2009)

Figure showing concentration of pupils in class



Source: primary data (2009)

15(75%) of the respondents strongly agreed that pupils do not concentrate in class because of hunger, 2 (10%) agreed while 1(5%) strongly disagreed and 2(10%) disagreed. the parents said that it was obvious one could not concentrate on an empty stomach especially children. The pupils revealed that in some cases when the teacher delays them in class and they have to go for lunch they do not concentrate in class.

The respondents were asked whether failure to have food contributes to low enrollment of pupils and this was their response.

Table 6 whether failure to have food contributes to low enrollment of pupils.

Response	Frequency	Percentage
Strongly agree	8	40
Agree	6	30
Strongly disagree	2	10
Disagree	4	20
Total	20	100

Source: primary data (2009)

The table shows that 8 (40%) of the respondents strongly agree that failure to have food contributes to low enrollment of pupils, 6 (30%) agree while 2 (10%) strongly disagree and 4 (20%) disagree.

The respondents were asked whether schools which had feeding programs perform better than those that are not and this was their response.

Table 7 Schools with feeding program perform better

Response	Frequency	Percentage
Strongly agree	11	55
Agree	6	30
Strongly disagree	-	-
Disagree	3	15

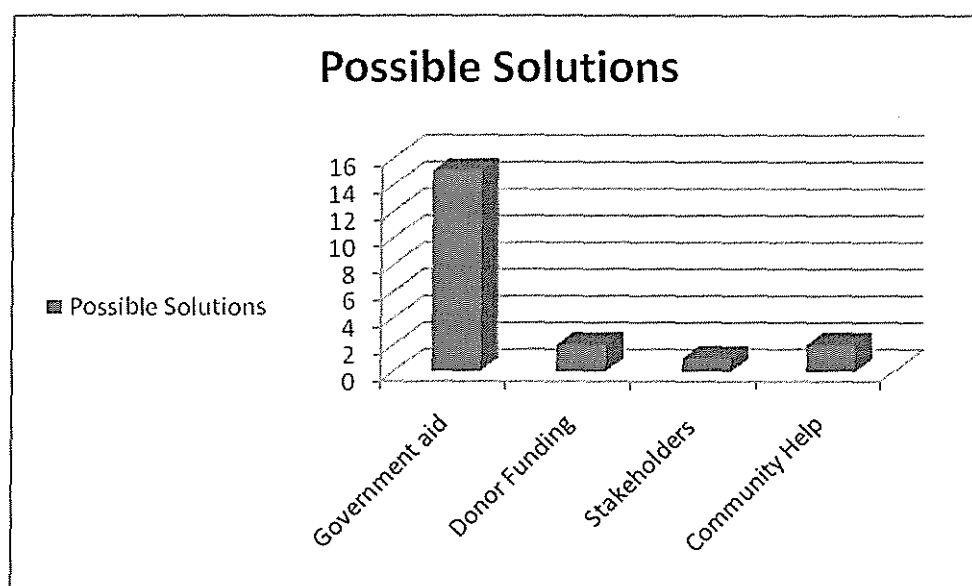
Total	20	100
-------	----	-----

Source: primary data (2009)

The table shows that 11(55%) of the respondents strongly agreed that schools which had feeding programmes performed better than those that did not have , 6 (30%) agreed and 3 (15%) disagree.

The parents agreed that feeding programme hindered academic achievement in a way that if pupils cannot concentrate in class then the performance will not be good which leads to repetition and hence poor performance. This means that the goal of government is not realized that is achieving education for all.

Figure showing response on possible solutions to the challenges



Source: primary data (2009)

Majority of the respondents said that the government should help in trying to solve the challenges posed by food insecurity, donor funding was also cited by the respondents as another probable solution to the challenges posed by food insecurity.

1 respondent said that stakeholders should be involved in trying to solve the problems while 2 respondents said that they should be solved with the help of the community.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0. Introduction

The major purpose of the study was to establish the effects of feeding programmes on the academic performance of pupils in Diff primary school. This chapter focuses on the summary of the findings, conclusions and recommendations. Finally the chapter ends with suggestions for further research.

5.1. Summary

The first objective was to determine the effects feeding programme on the performance of pupils. The study revealed that pupils academic performance is affected by such factors such as food availability as well as proper nutrition. They also agreed that nutrition is very important in the growth and development of children and this is supported by Levinger Beryl (2000) that nutritional programs facilitate the growth of a child in all dimensions and have considerable long lasting effects on a child's life.

The second objective focused what are the possible solutions that can be put in place to mitigate the effects of effects of food insecurity to pupils academic performance and education. The most possible solutions that were given include financial support of the poor families; government subsidies should also be included to help the donors who are possibly the highest contributors to free feeding programmes.

According to Grantham McGregor (1991) school attendance and achievement are affected by a host of variables including the capacity of a child as a biosocial organism to process and respond to stimuli. The study also revealed that children from poor families did not perform well in class because of hunger and therefore did not perform well and this is supported by FAO (2000) hunger hinders school achievement.

The third objective focused on the relationship between social economic factors such as family background and the health of pupils and how they affect performance 30% of the respondents agreed that they had children who were sick due to malnutrition. According to WHO (2000) malnutrition in all its forms increases the risk of disease and early death.

The importance of nutrition and 30% of the respondents said that nutrition is very important on determining the academic performance of pupils. According to Berkeley Seth and Dean Johnson (1991) nutrition is important for a development of a country because if children are healthy they study well and become future leaders.

5.2. Conclusion

The main purpose of the study was to determine the effects of free feeding programme on academic performance of pupils. It was established that feeding programmes does play a part in academic performance of pupils. Thus families that could not provide basic necessities their children did not get the required education. Nutrition was very important to the growth and development of a child and that poor nutrition led to diseases hence poor school attendance leading to poor performance. Poor nutrition leads to poor performance in class and children who are hungry cannot concentrate in class. The study also revealed that poor nutrition affected the enrollment of pupils.

The study found out that poor nutrition led to diseases and therefore because of diseases children do not perform well in school. The study also found out that nutrition was very important and that for a country to develop it had to focus on nutritional programs.

5.3. Recommendations

The government should make sure that it focuses on nutritional and feeding programs in schools.

The parents and the community should be sensitized on the importance proper and stable family background and how they influence child development.

Parents should make sure that they provide food for their children as they go to school so that they do not go hungry and fail to concentrate in class.

A topic or subject on nutrition should be taught to the pupils so that as they grow up they know the importance of nutrition and how to eat right.

5.4 Suggestions for further research

More research should be done on the effects of poverty on academic performance of pupils and how they can be alleviated.

REFERENCES

Ahmed, A. U. (2004). *Assessing the performance of conditional cash transfer programs for girls and boys in primary and secondary schools in Bangladesh*. Project report prepared for the World Bank. Washington, D.C.: International Food Policy Research Institute.

Ahmed, A. U. (2000). Targeted distribution. In *Out of the shadow of famine: Evolving food markets and food policy in Bangladesh*, ed. R. Ahmed, S. Haggblade, and T. E. Chowdhury, 213-231. Baltimore, Md., U.S.A.: Johns Hopkins University Press.

Ahmed, A. U., and M. Arends-Kuenning. (2003). Do crowded classrooms crowd out learning? Evidence from the food for education program in Bangladesh. Discussion Paper 149. Food Consumption and Nutrition Division. Washington, D.C.: International Food Policy Research Institute.

Ahmed, A. U., and K. Billah. (1994). *Food for education program in Bangladesh: An early assessment*. Bangladesh Food Policy Project Manuscript No. 62. Washington, D.C.: International Food Policy Research Institute.

Ahmed, A. U., and C. del Ninno. (2002). *The Food for Education Program in Bangladesh: An evaluation of its impact on educational attainment and food security*. Discussion Paper 138. Food Consumption and Nutrition Division. Washington, D.C.: International Food Policy Research Institute.

BBS (Bangladesh Bureau of Statistics). (2003). *Report of the household income and expenditure survey, 2000*. Planning Division, Ministry of Planning, Government of the

People's Republic of Bangladesh. Dhaka: Bangladesh Bureau of Statistics. Chambers C. M. 1991. An evaluation of the World Food Programme (WFP)/Jamaica 2727 School Feeding Program. *Cajunas* 24(2): 91-102.

Chandler, A.M., S. Walker, K. Connolly and S. Grantham-McGregor. (1995). School breakfast improves verbal fluency in undernourished Jamaican children, *Community and International Nutrition* 125.

Clay, E., and O. Stokke. (2000). *Food aid and human security book*, Frank Cass, EADI, ODI.

Coates, J., and Z. Hassan. (2002). *School feeding in vulnerable rural areas and urban slums in Bangladesh*. A baseline report to the World Food Programme, Bangladesh. Medford, MA: Friedman School of Nutrition Science and Policy, Tufts University.

Dall' Acqua F.M. (1991). Economic adjustment and nutrition policies: Evaluation of a school-lunch program in Brazil. *Food and Nutrition Bulletin* 13 (3).

Del Rosso, J.M. (1999). *School feeding programs: Improving effectiveness and increasing the benefit to education: A guide for program managers*. The Partnership for Child Development. www.ceid.ox.ac.uk/child/.

Friedman, M.(1957). *A theory of the consumption function*. Princeton, N.J.: Princeton University Press.

Grantham-McGregor, S., S. Chang, and S. Walker. (1998). Evaluation of school feeding programs: Some Jamaican examples. *American Journal of Clinical Nutrition* 67(suppl).

48 Jacoby, H. 2002. Is there an intrahousehold flypaper effect? Evidence from a school feeding programme. *The Economic Journal* 112 (476).

Jacoby, E., S. Cueto, and E. Pollitt. (1996). Benefits of a school breakfast program among Andean children in Huaraz, Peru. *Food and Nutrition Bulletin* (17).

Khandker, S.R.(1996). *Education achievements and school efficiency in rural Bangladesh*. World Bank Discussion Paper 319. Washington, D.C.: World Bank.

Lopez, I., et al. (1993). Breakfast omission and cognitive performance of normal, wasted and stunted school children. *European Journal of Clinical Nutrition* 47.

Meme, M. M., W.Kogi-Makau, N.M. Muroki, and R.K. Mwandime.(1998). Energy and protein intake and nutritional status of primary School Children 5 to 10 years of age in schools with and without feeding programmes in Nyambene District, Kenya. *Food and Nutrition Bulletin* 19(4).

Meng, X., and J. Ryan. (2004). *Evaluating the food for education program in Bangladesh*. Draft report. Canberra: Australian National University.

Moore, E., and L. Kunze. (1994). *Evaluation of the Burkina Faso school feeding program*. Catholic Relief Services, Consultant Report (Unpublished).

Pelletier, D.L., K. Deneke, Y.Kidane, B. Haile, and F. Negussie. (1995). The food–first bias and nutritional policy: Lessons from Ethiopia. *Food Policy* 20(4).

Pollitt E. (1990). Malnutrition and infection in the classroom: Summary and conclusions. *Food and Nutrition Bulletin* 12 (3).

Pollitt, E. (1995). Does breakfast make a difference in school? *Journal of the American Dietetic Association* 95.

Pollitt, E., M. Gersovitz, and M. Garguilo. (1978). Educational benefits of the U.S. school feeding program: A critical review of the literature. *American Journal Public Health* 68.

Powell, C., and S. Grantham-McGregor. (1983). An evaluation of giving the Jamaican government school meal to a class of children. *Hum. Nutr. Clin. Nutr.* 37C.

Powell, C.A., et al. (1998). Nutrition and education : A randomized trial of the effects of breakfast in rural primary school children. *American Journal of Clinical Nutrition* 68 (4).

Ravallion, M., and Q. Wodon. (1997). *Evaluating a targeted social program when placement is decentralized*. Washington, D.C.: World Bank.

Seshadri, S., and T. Gopaldas. (1989). Impact of iron supplementation on cognitive functions of pre-school and school-age children: The Indian experience. *American Journal of Clinical Nutrition* 50 (Suppl).

Simeon, D.T., and S. Grantham-McGregor. 1989. Effects of missing breakfast on the cognitive functions of school children of differing nutritional status. *American Journal of Clinical Nutrition* 49.

World Bank. (2002). *Poverty in Bangladesh: Building on progress*. Poverty Reduction and Economic Management Sector Unit, South Asia Region. Report No. 24299-BD.

Washington, D.C.: World Bank. 49

World Food Programme (WFP). (2002a). *School feeding works for girls education*. Policy Brief. Rome: World Food Programme.

WFP. (2002b). *Global school feeding report 2002*. WFP School Feeding Support Unit. Rome: World Food Programme.

WFP. (2001). *School feeding works, An annotated bibliography* (Unpublished).

WFP. 1996. *Report on pilot school feeding program evaluation report*. WFP/Malawi (Unpublished).

APPENDIX I
QUESTIONNAIRE FOR TEACHERS

Dear respondent,

My name is MWAROGO THOYA MAITHA, a student from Kampala International University, Institute of Continuing and Distance Learning.

I am collecting data in relation to the effects of school feeding programme on academic performance of pupils in Adu primary school in Magarini district, Kenya.

Please note that we do not mention people's names to ensure privacy and confidentiality.

TICK WHERE APPROPRIATE

General instructions

- a) This questionnaire is to be filled by teachers
- b) Please assist and answer the appended questions after reading carefully
- c) Please tick in the space of choice provided
- d) Write comments in the provided space where necessary
- e) Do not write your name on the questionnaire
- f) The information collected will be confidentially kept and will only be used for academic purpose

Personal details

A) Sex:

☐

Male

☐

Female

B) Age

Age bracket	Tick where appropriate
12-16 years	
18-25 years	
25 years and above	

C) Education class level

Please indicate your educational level

Educational class level	Tick where appropriate
Form one	
Form two	
Form three	
Form four	

PART TWO: Impact of feeding programme on pupils performance.

TICK WHERE APPROPRIATE

i) Does lack of food affect pupils performance? If yes give reasons.

.....

.....

.....

ii) Is the ministry of education doing enough to address the issue?

.....

.....

.....

iii) What other factors are impacting on pupils' performance ?

.....

.....

.....

iv) What challenges do pupils encounter in their quest for education at your school?

.....

.....

v) Are there any possible solutions to the challenges posed by food insecurity?

.....

.....

THANKS