EFFECTS OF SCHOOL FEEDING PROGRAMME ON PARTICIPATION IN PUBLIC PRIMARY EDUCATION IN ISIOLO CENTRAL DIVISION, ISIOLO COUNTY, KENYA

WAMARU/EUNICE MUGURE

RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF EDUCATIONAL MANAGEMENT, POLICY AND CURRICULUM STUDIES, SCHOOL OF EDUCATION IN PARTIAL FULFILLMENT FOR THE REQUIREMENTS OF AWARD OF MASTER OF EDUCATION DEGREE

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MAY 2012
DECLARATION

This research project is my original work and has not been submitted for award of any degree in any other University.

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DEDICATION

To my mum Alice and my dear children Linda and Livya

Thank you for your love and support throughout this study.

To my friends and colleagues for their support,

Lucy and Willy who assisted me in typesetting the dissertation

and last but not least; I sincerely thank God for giving me the gift of life.

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Last but not least, I sincerely thank God for giving me the gift of life, energy and health to pursue my studies.
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<th>Abbreviation</th>
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<td>ASAL</td>
<td>Arid and Semi-Arid Lands</td>
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<td>EFA</td>
<td>Education for All</td>
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<td>FAO</td>
<td>Food and Agriculture Organization</td>
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<td>FPE</td>
<td>Free Primary Education</td>
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<td>GoK</td>
<td>Government of Kenya</td>
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<td>HGSFP</td>
<td>Home Grown School Feeding Programme</td>
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<td>HIV</td>
<td>Human Immuno-Deficiency Virus</td>
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<td>KCPE</td>
<td>Kenya Certificate of Primary Education</td>
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<td>KSSP</td>
<td>Kenya Education Sector Support Programme</td>
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<td>MDG</td>
<td>Millennium Development Goals</td>
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<td>Mid Day Meals</td>
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<td>Ministry of Agriculture</td>
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<td>National Development Plan</td>
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<td>NSFC</td>
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<td>SF</td>
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<td>SMC</td>
<td>School Management Committee</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<td>UNICEF</td>
<td>United Nations International Children Emergency Fund</td>
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<td>UPE</td>
<td>Universal Primary Education</td>
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<td>USDA</td>
<td>United States Department of Agriculture</td>
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<td>WFP</td>
<td>World Food Programme</td>
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ABSTRACT

School feeding program was introduced in Kenya in 1966 with an aim of improving participation of children in primary schools, in relation to enrolment, retention and academic performance. Previous studies carried out to determine the impact of SFP have yielded mixed results. While some studies revealed that SFP improves school attendance and retention, others reported no impact. The study sought to reconcile these conflicting research findings by assessing whether SFP had enhanced participation of children in primary education in Arid and Semi Arid Lands and specifically in Isiolo Central Division. The objectives of the study were to: establish how School Feeding Programme was being implemented in public primary schools in Isiolo Central Division, investigate the extent to which SFP has affected enrolment trends, assess the effects of SFP on retention in public primary schools in Isiolo Central Division, and investigate the extent to which School Feeding has affected performance of pupils in public primary schools. The study was based on the Classical Liberal Theory of Equal Opportunity advanced by John Dewey, which argues that education systems should be designed with a view of removing barriers of any nature that hinder children from lower economic backgrounds from taking advantages of the inborn talents that could accelerate social promotion. The study employed a descriptive survey research design targeting all the public primary schools in Isiolo Central Division. The target population was 27 headteachers, 299 teachers, 10,375 pupils and one District SFP Officer. The study sample comprised of 20 (74.1%) headteachers, 20 (6.7%) teachers, 400 (3.9%) pupils and one (100.0%) District SFP officer. Data was collected using questionnaires for teachers, pupils, headteachers and interview schedule for SFP officer. Prior to the actual data collection procedure, a pilot study was conducted in two schools to test the reliability and validity of the instruments. Data collected was coded and entered in computer for analysis using the Statistical Package for Social Sciences (SPSS). Data analysis procedures employed involved both quantitative and qualitative procedures. Quantitative data was analysed using descriptive statistics such as frequency counts and percentages. The qualitative data was analyzed and presented thematically in line with the objectives of the study. The study established that SFP has had impact on enrolment and retention in the schools. It was established that schools had recorded improvements in implementation of SFPs in relation to number of pupils served, amount of food served, consistency in food supply, facilities for food preparation and community participation in the programme. The study also established that SFP had played a big role in improving academic performance of pupils. It was concluded that SFP had greatly improved participation of children in primary education in Isiolo Central division in relation to access, retention and academic achievement. The study recommends that the government should ensure that there is proper and regular feeding programme in all public primary schools in Isiolo Central Division; should deliver food timely to all public primary schools for effective running of the feeding programme and the local leaders should educate parents on the importance of sending their children to school, with or without the SFPs.
CHAPTER ONE
INTRODUCTION

1.1 Background to the Problem

Education is key to development and poverty alleviation (World Bank 2002). The Government of Kenya recognizes the strategic importance of improving the overall education level of Kenyans within the context of poverty reduction and economic growth (Ministry of Education, 2005). It is therefore making efforts to achieve Universal Primary Education (UPE) and Education for All (EFA). One of such efforts is initiation of School Feeding Programme (SFP). This is because hunger is one of the hindrances to attainment UPE and EFA especially in ASAL Districts worldwide.

The SFP can be traced back to the mid 19th century when Paris guards in France established a fund for providing needy children with school lunch (Ngome 2002). Studies also show that SFPs have been in existence in a number of countries since the beginning of the 20th century. This was after realization that hunger was one of the contributory factors to under participation in education. In Netherland for example in 1900, the local governments were authorized to make meals available to school for youngsters who were unable due to lack of food to attend school regularly (Ngome 2002).

Some of the early programmes catered for orphan children while others were introduced in schools to serve the underprivileged children who could not have proper meals at home and therefore needed a meal at school. The SF was also seen as a way of ensuring equal opportunity for all children and increasing time available for work, especially by women who were freed from having to prepare children meals at home (Loewald, 1980).
Studies also show that before 1930, the SF was not looked at in terms to education but was seen as a kind of relief for the poor. However, different countries started it with different objectives, for example in the United Kingdom, the SFP was started in 1960 after realization that malnourished children would not benefit from Education (Scotts 1953). In Japan SFP was started in 1989 by a Buddhist priest with food festivals as alms, but later it was developed and funded by the government (Kimani, 1985).

SFPs were also started in many African countries. This was after studies done by World Health Organizations (WHO) revealed that malnutrition was rife on the continent and was affecting the school-age children. In Lesotho for example, the World Health Organization (WHO) nutrition survey conducted in 1960 indicated that 72 percent of children were victims of malnutrition (Ngome, 2002). The school programme was therefore intended to eliminate malnutrition to enable children attend school. Although the SFP started in a few countries, it later expanded throughout the world and by 2001 WFP SFPs had reached 15 million children in 57 countries Worldwide. Studies by Onyimbo (2007) show that in Uganda, Food Programme was introduced in schools in 1993 and prior to the introduction, enrolment was 17.649 percent and it increased by 70 percent to 30.668 percent after the food programme was introduced. In 1990s in Ethiopia’s regions of Amhea and Tigray, the government started distribution of food to pupils with the help of WFP and this increased enrolment by 50 percent between 1994 and 1995.

In Kenya, the SFP was started in 1966 after a survey on feeding habits and nutritional state of school children in Kenya by Bohdal and Co-workers. It was started by the National School Feeding Council (NSFC) and supported by parents who paid nine
Kenyan shillings per term per child and by 1973 over 30,000 children were involved in the program. The program was mainly concentrated in central province and did not cover some areas for example ASAL districts where malnutrition was prevalent. The program was uniform and children received same type of food which comprised of beans and maize supplemented with 'suplo' an industrial product composed of barley, flour, yeast and skimmed milk (Pieters, Van Steen Bergen, Vande Hoeven, Demoel & Van Rens, 1975).

In 1979, there was a milk program that lasted only for a short time. It proved too expensive to sustain and later stalled under the Kenyan Structural Adjustment Program (USDA 2009). World Food Program’s SFP was started in Kenya in 1980 with ten districts in the upper and lower Eastern Province which included Isiolo district with an objective of improving attendance, attention span and improving health and nutrition of pupils (MoE 1999). A study conducted by World Health Organization (WHO) revealed that some children went to school without breakfast and some not even lunch a situation that made learning especially in the afternoon difficult (WHO 2001).

Isiolo is one of the districts in ASAL areas and most of the population lives in utter poverty. An economic survey conducted in 2007 revealed that Isiolo district had 71.3% of the rural population living below poverty line and it was ranked the tenth poorest district in Kenya (GoK 2007). Parents therefore opted not to take their children to school because of higher opportunity cost (Ngome 2002). This situation is worsened by natural calamities like draught, floods, tribal conflicts and seasonal migration of people with their animals. According to GOK (2005a) the SFP was therefore introduced to ensure that
children are healthy, well fed and able to learn. Good health and nutrition increases enrolment and stabilizes attendance of most disadvantaged children especially girls.

A number of studies conducted in other parts of the world show that school feeding programs are associated with increased enrolment (Gelli, Meir, & Espejo, 2007). In India, an evaluation of Mid-Day Meals (MDM) program, the largest School Feeding Program in the world, found that female school participation was approximately 15 percent higher in schools that provided the MDM program than in schools that did not (Drèze & Kingdon 2001). A randomized controlled trial of a school breakfast program in Peru also found higher attendance rates in treatment versus control schools (Jacoby, Cueto, & Pollitt 1996), and similar results were seen in a study of Kenyan preschool children receiving breakfast, where school participation of pupils in the treatment group was 8.5 percent higher than in the control group (Vermeersch & Kremer 2004). It is however not clear whether School Feeding Programme has had an impact on participation in primary education in Isiolo County, Eastern Province.

Access and retention are major challenges facing education provision in Kenya, especially in hardship areas like Isiolo. Although the government initiated FPE since 2003, this policy has not ensured total enrolment for all primary school-going children. In hardship areas such as Eastern Province, only one out of three children attends primary school (Achoka, Odebero, Maiyo, & Mualuko, 2007). Among the main causes of low participation is hunger. This study established the effects of School Feeding Programmes on participation in primary education in Isiolo Central Division.
1.2 Statement of the Problem

School feeding program was introduced in Kenya in 1966 with an aim of improving participation of children in primary schools, in relation to enrolment, retention and academic performance. Previous studies carried out to determine the impact of SFP have yielded mixed results (Buttenheim, Alderman & Friedman, 2011). While some studies (Moore, 1994; Ngome, 2002; Onyimbo, 2007) revealed that SFP improves school attendance and retention, others (Pan American Health Organization, 1990; Karisa, 2006) reported no impact. The question therefore was: to what extent does SFP affect school participation in Isiolo District? The study sought to reconcile these conflicting research findings by assessing whether SFP has enhanced participation of children in primary education in Arid and Semi Arid Lands and specifically in Isiolo Central Division where this study was conducted.

1.3 Purpose of the Study

The purpose of the study was to assess whether the SFP has enhanced participation of children in primary education in Isiolo Central Division. The study also suggested possible solutions to the shortcomings identified in the programme.

1.4 Objectives of the Study

(i) To establish how School Feeding Programme was being implemented in public primary schools in Isiolo Central Division.

(ii) To establish the extent to which School Feeding Programme affected enrolment trends in public primary education in Isiolo Central Division.
(iii) To determine the effects of School Feeding Programme on retention in public primary schools in Isiolo Central Division

(iv) To find out the extent to which School Feeding Programmes affected performance of pupils in public primary schools

1.5 Research Questions

The study was guided by the following research questions:

(i) How was the School Feeding Programme being implemented in public primary schools in Isiolo Central Division?

(ii) To what extent has School Feeding Programme affected enrolment trends in public primary education in Isiolo Central Division?

(iii) What are the effects of School Feeding Programme on retention in public primary schools in Isiolo Central Division?

(iv) To what extent has School Feeding Programme affected performance of pupils in public primary schools?

1.6 Significance of the Study

The study may serve as informative document to those involved in provision of education on how food which is a basic need can lead to wastage in education. The study may provide data that can be utilized by the government in developing policies related to SFP and provoke the government to roll out SFP to other regions without it in the country.

The challenges may be used to improve the programme. The study may also add to the body of knowledge on the effects of SFP on participation of children to primary schools. Future researchers may benefit from the study in that they can build on it.
1.7 Assumptions of the Study

i. All public primary school pupils in Isiolo Central Division had access to SFP.

ii. That all public primary schools kept records of enrolment, dropouts and absenteeism and that the respondents were willing to share the information with the researcher.

iii. That all public primary schools sit for National exams and were willing to share these results with the researcher.

1.8 Limitations of the Study

i. Poor communication in Isiolo Central Division limited the researcher to access schools in very remote areas.

ii. The study was limited by insecurity in Isiolo and the vastness of the district.

iii. The study limited itself to Isiolo Central Division only. To get conclusive results; all Districts under SFP should have been studied.

1.9 Delimitations of the Study

i. Although there are many factors affecting participation of primary school children to schools, the study concentrated on SFP only.

ii. The study confined itself to teachers, pupils, headteachers and SFP officer and not other stakeholders like parents and school management committees.

iii. The study confined itself to public primary schools only. Private schools were not covered.
1.10 Theoretical Framework

This study was based on the Classical Liberal Theory of Equal Opportunity advanced by John Dewey in 1916 that expressed the view that there should be equal opportunities in Education for All. The basic assumption of this theory is that every child is born with innate talents and capabilities and that education systems should be designed with a view of removing barriers of any nature that hinder children from lower economic backgrounds from taking advantages of the inborn talents that could accelerate social promotion (Sherman and Wood 1982). The theory demands that opportunities be availed for individuals to go to schools and that access to schools be based on merit and not social economic backgrounds.

The theory was applicable to the study because SFPs are geared towards meeting nutritional needs of children from poor backgrounds thereby increasing access for education and creating an enabling environment for learning. Using the theory, the researcher found out the extent to which SFP has affected participation to primary education in Isiolo Central Division.

1.11 Conceptual Framework

Conceptual framework is graphical or diagrammatical representation of the relationship between independent and dependant variables of a given study (Orodho, 2008). In this case the independent variable is the SFP while the dependant variable is access of pupils to public primary schools. The argument is that SFP helps to improve school enrolment and attendance and therefore the meals are an incentive to learners. Furthermore, when children’s nutritional value improves they are less susceptible to diseases like diarrhea, pneumonia and malaria and therefore they attend school regularly (Ngome 2002)
Low economic status, cultural practices, lack of food and poverty in ASAL regions lead to poor enrolment in school, low academic achievement and therefore under development. SFP is an intervention to correct this problem. It leads to high nutritional status, improved health, and high attendance rates which help to achieve UPE and EFA. This leads to high academic achievement, increased economic growth and therefore improved living standards of the people. Figure 1.1 presents the conceptual framework of the study.

**Figure 1.1: Conceptual Framework on the Effects of SFP on Education Participation**

Figure 1.1 is a diagrammatic representation of the conceptualized relationship between the independent and dependent variables of the study. The independent variable of the study is implementation of School Feeding Program, whose indicators include how SFP is managed in the schools, the number of pupils benefiting from the program, number of target schools reached and the quality and quantity of food provided. This is expected to
have an effect on participation of pupils in primary education, which is the dependent variable of the study. The indicators of participation included high net enrolment rates in the schools, retention, and academic performance. There are also intervening variables, which could affect the effects of SFP on education participation. These include the challenges facing SFP such as lack of resources like food and fuel for effective implementation of the program, high poverty levels increasing the demand for food, and SFP management and leadership issues such as interference by local politicians, leadership wrangles, and misappropriation of resources.
1.12 Operational Definition of Central Terms

Access - Enrolment of a child to a primary school

Attendance - Being present in school.

Enrolment - Number of school children in a particular primary school

Moranism - A developmental stage in the growth of a Maasai male after circumcision when he is put on seclusion for several years.

Nutritional Status - State of health as a result of quality and quantity of food consumed

Opportunity cost - Indirect cost of education including time taken in school foregoing other activities

Participation - Access, Retention and performance

Performance - Scores obtained by pupils in tests done in the school and KCPE

Retention - Completion of primary school cycle i.e. from standard one to standard eight.

School Feeding Programme - A scheme of providing middle meal to children in schools

School-Age Children - Young children between ages 6-13 years eligible to enrolling in primary school.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature on SFP under the following headings

- Implementation of SFP in the World
- Implementation of SFP in Kenya
- Effects of SFP on access/retention of children in schools: a global perspective
- Effects of SFP on access and retention of children to schools in Kenya
- Effects of SFP on performance

2.2 Implementation of SFP in the World

SFPs are implemented in various countries in the world. For example in Scotland in 2002, the Scottish Parliament reformed the School Meal Programme through the Expert Panel Report on School Meals – Hungry for Success, which addressed the need to establish links between “learning and teaching on healthy eating in the curriculum and food provision in the schools” (WFP, 2012). The Hungry for Success report is now the regulatory framework for the national programme. In 2003, the Local Government Act in Scotland established the duty of best value for school meals, emphasizing its educational and health aspects. In May 2004, the Scottish Executive implemented its “Sustainable Procurement Guidance for Public Purchasers”, which stated that buyers may legitimately specify requirements for freshness, delivery, frequency, specific varieties and production standards (WFP, 2012).
According to Kristjansson, Petticrew, MacDonald, Krasevec, Janzen, Greenhalgh, Wells, MacGowan, Farmer, Shea, Mayhew, Tugwell, Welch (2009), in both higher and lower income countries, the goals of School Feeding Programs differ, but often include relieving short-term hunger, improving micronutrient status, cognition and academic performance. Agricultural and community development may be secondary outcomes in developing countries if locally grown food was used (Sanchez 2005).

UNESCO (2004) states that implementation of SFP calls for the establishment of a policy that provides a framework within which to implement the subsequent recommendations that focus on the most critical aspects of School Feeding Programmes. These aspects include: targeting, cost and financing issues, ration composition and meal delivery; programme implementation, monitoring and evaluation, and integrating feeding with other interventions that address the nutrition and health needs of school children.

According to the World Food Program “Research and experience showed that when food was provided at school, hunger was immediately alleviated, and school attendance often doubled within one year” (WFP 2005). Macintyre argued that school feeding programs addressed a symptom, rather than the root causes of hunger and that they may be stigmatizing (Macintyre 1992). One important concern in school feeding studies was that, in poor families, the home diet was reduced for children who were receiving food at school: this is termed ‘substitution’. For example, a survey on school feeding in Malawi showed that 77% of children reported that they get less food at home when they receive school
meals. This was substantiated by caregivers; 82% of caregivers reported that substitution was occurring (Kristjansson, et al., 2009).

The NEPAD High-Level African Consultation on HGSF in Ghana identified two main models for programme implementation. One is a “bottom up” approach with local ownership, drawing on the strengths of existing community-based institutions, such as School Management Committees and village groups, to manage the HGSF programme (WFP, 2012). This bottom-up model is decentralized at the district and regional levels to ensure strong monitoring and programme supervision. Food is procured by local school or community committees, from women’s groups and farmer-based organizations, with some support from district and state institutions. In some cases, such as in Ghana and Thailand, schools or school-based committees are primarily responsible for implementation, making crucial decisions regarding all aspects of procurement and service delivery. The second model for programme implementation is centralized at the national or state level and typically relies on contractors and traders for food procurement. While there is some community contribution and participation, such as from school or community gardens, the main ownership for the programme rests with the state or regional institution (WFP, 2012).

2.3 Implementation of SFP in Kenya

2.3.1 Government policies supporting SFP

According to USDA (2008), the government of Kenya acknowledges the critical role of school feeding in enhancing health and nutritional status of primary school children and has adopted several policies that provide legal framework for implementing and regulating SFPs in Kenya. These include:
a. The Kenya Vision 2030. This is a long-term national planning strategy to raise Kenya to a middle income country by 2030. In this regard, it outlines policy targets to achieve MDGs by reducing food poverty by half; attaining UPE and addressing the over 75% of food poor population in rural areas (Republic of Kenya, 2007).

b. The Kenya Education Sector Support Programme (KESSP) (2005-2010) recognizes the need to enhance sustainability of the SFP in its program, that is the school health, nutrition and feeding programs (Ministry of education, 2005).

c. The 2007 National Food and Nutrition Policy (NFNP) focuses on food security for all Kenyans. The Home Grown School Feeding concept note (2007) advised HGSF to be implemented by MoE as at July 2009 (USDA 2009)

2.3.2 Program implementation and partners

Currently three school feeding programmes are being implemented in Kenya. These are WFP School Feeding Programme which provides meals to 770,500 children in 1,750 schools in Nairobi and Mombasa slums. WFP is however supporting a gradual handover of its SFP to the government HGSP (USDA, 2009). The second one is Home Grown Schools Feeding Programme, launched by the MoE in 2008 which kicked off in July 2009. This programme targets Semi Arid Lands of the country in a cash transfer program under which schools receive resources from GOK in a special account designated for local purchase of cereals, pulses and oil. The programme is directly managed at the school level by SMC and a School Feeding Sub-Committee (SFC) (MoE & WFP, 2007).

The Ministry of Agriculture’s ‘Njaa Marufuku Kenya’ (NMK) is a program supported by FAO in a three year program with decline in support each year (USDA, 2009). The NMK
intends to improve school enrollment and attendance as well as student health and academic performance. The MoA provides the school with cash to purchase local food commodities for school meals covering 100% of the requirement the first year, 75% the second year and 50% the third year. Schools are graduated from the program after the third year with the objective that the community will continue to support the programme (USDA, 2009).

2.3.3 Organization and management of SF

The money for HGSF program flows from the MoF to the MoE and then directly to the individual schools. According to the HGSF Program Implementation and Training Guidance Manual, organization and management of SF entails the following responsibilities:

1. Standard and regulations are set by MoE in terms of nutritional requirements, storage, handling guidelines, fundraising, co ordination and implementation.

2. Supervision, reporting and technical assistance which include training, advice, storage, preparation and book keeping at the district level.

3. The head teacher keeps record, prepares a procurement plan and confirms quantity and quality of commodities delivered and signs for delivery.

4. The SMC and SFC led by the head teachers manage the HGSF program at schools level. Parents represented by the committee are responsible for seeing general management of the program which includes overseeing food deliveries, signing for reports and delivery notes and making procurement and management decisions. To access funds, the head teacher, SMC chairperson and SFS chairperson must sign (MoE, 2008).
2.3.4 Food procurement, Preparation, Storage and Food Basket

According to USDA, (2009) the schools should have kitchen and storage that meet WFP standards. HGSF provides for energy efficient stove or infrastructure. The food ratio include 150g cereals (maize), 40g legumes (beans or yellow split peas), 5g fortified vegetable oil and 3g iodized salt. The Ministry of Education’s HGSF issues local tenders for cereals, pulses and oil while firewood and salt are sourced from parents.

2.3.5 Community participation

Each household is asked to contribute to SFP in terms of firewood, cash for cooks salaries and salt. If the house holds cannot contribute, the SMC makes arrangements such as rotating cooking duties (USDA 2009).

2.4 Effects of SFP on Access and Retention in Schools: A Global Perspective

Introduction of SFP has lead to increase in enrolment and also retention of children to schools worldwide. A study done in Japan for example revealed that Tokyo children fed on 200 milliliters of milk daily for six months were more cheerful and attended school regularly. In Santiago Rodriguez, a poor area in North West Dominican Republic, termination of SFP adversely affected enrolment which dropped from 23 to 14 percent between 1980 and 1982 when the program was not in operation. This impact was more on females in rural schools (Ngome, 2002).

In Iraq, the SFP was undertaken to support the Ministry of Education to assist the most vulnerable people. Under the programme, the children receive 80grams nutritious dates fortified with a range of vitamins. The World Food Programme’s experience for the last 45 years, show that where school attendance is low, the promise of at least one nutritious
meal each day boosts enrolment and promotes regular attendance. Parents are also motivated to send their children to school instead of keeping them at home to work or care for siblings (WFP & World Bank, 2009). In some governorates in Iraq, only 36 percent of children are enrolled in primary schools. Nine out of ten children under the age of 15 do not attend school regularly while only 66 percent of the children complete school. The programme is therefore helping Iraq to achieve UPE by 2015 which is the second of the eight millennium goals adopted by 192 countries in the world including Iraq. Research also shows that SFP helps to achieve the first five millennium goals (Lambers, 2009a).

An evaluation of India’s Mid-Day Meals (MDM) program, the largest School Feeding Program in the world, found that female school participation was approximately 15 percent higher in schools that provided the MDM program than in schools that did not (Drèze & Kingdon 2001). However, the MDM program did not appear to have a detectable effect on the enrolment of boys.

The Pakistan SF provides an income transfer in form of one or two tons of oil to families whose girls attend school for 20 days in a month. In participating schools, the enrolment improved by 70 percent compared to 14 percent in the Province's overall. The programme also aims at putting additional food into the hands of mothers and to serve as a contact between mothers and teachers on distribution which enhances their partnership education (WFP, 1996).

Evidence from randomized controlled trials also demonstrates increases in attendance and enrolment and a reduction in dropout with in-school feeding. One study in Jamaica gave
breakfast to children for a year and found that attendance rose by 2.3 percentage points more than it rose for the control group from a very high baseline, relative to other low-income countries, of around 80 percent (Powell, Walker, Chang & Grantham-McGregor, 1998).

Evaluation of take-home rations programs further shows impact on enrolment. In Pakistan, overall enrolment of girls in assisted schools grew by 135 percent between 1998/99 and 2003/04, compared with 29 percent in control schools during the same period, and was particularly strong in the first grade of primary school: 211 percent versus 5 percent in control schools. The program also appeared to increase awareness of the benefits of girls’ education. Before the program started, 48 percent of households did not send any of their daughters to school; afterwards, all households educated at least one daughter (WFP, 2005). Similarly, the take-home rations program in Bangladesh increased girls’ enrolment in program schools by 44 percent, and boys’ enrolment by 28 percent, while in non-program schools, enrolment increased by 2.5 percent during the same period (Ahmed & del Ninno 2002).

A randomized controlled trial of a school breakfast program in Peru also found higher attendance rates in treatment versus control schools (Jacoby, Cueto, & Pollitt 1996), and similar results were seen in a study of Kenyan pre-school children receiving breakfast, where school participation of pupils in the treatment group was 8.5 percent higher than in the control group (Vermeersch & Kremer 2004).

A fortified biscuit program in Bangladesh appeared to have increased net enrolment rates by 10 percent, increased attendance by 1.3 days per month, and reduced the probability of
dropping out by 7.5 percent (Ahmed 2004). A systematic review of these and other school feeding studies in low-income countries also found greater attendance for students receiving in-school meals compared with students in control groups (Kristjansson, et al., 2009). On average, the per child increase in school attendance was four to six days a year.

According to WFP (2009), food insecurity has significant impact on education in Africa. The WFP was therefore assisting the government of Malawi through SFP and the November 2006 appraisal mission recommended that WFP continue supporting government efforts to achieve educational goals related to increasing access to primary education through SFP. The project would assist 635,000 primary school students with on-site meals throughout the year. An evaluation of a small pilot SFP project in Malawi on its effects on enrolment and attendance after the inception of SFP showed that over a three months period, there was a five percent increase in enrolment and up to 36 percent improvement in attendance/absenteeism compared to control schools over the same period (WFP, 1996).

In Somalia, recurring droughts, structural poverty, continuous displacement of people and lack of a Central Government for nearly 20 years have seriously hampered opportunities for children to enroll, attend and complete primary schools (WFP 2009). To reduce these problems, WFP begun an SFP in 2003 and since then the number of children benefiting from the programme has grown significantly. In 2008 for example, the number of children benefiting from SFP more than doubled from 2007. The SFP is being used to achieve UPE and the Millennium Development Goals (MDGs). In 2008, attendance in WFP assisted primary schools was 97% compared to 92% in other schools. WFP also
introduced in Somalia a take-home ration programme to encourage girls attend. Girls who attended regularly received a take home ration for their families (Lambers, 2009a).

In Burkina Faso, SFP resulted in increased enrolment, less absenteeism and dropouts. For example in the year 2000, the WFP fed 12.3 million children and in 2001 it fed 15 million with 2.5 million receiving a take home ration. Similarly, a recent evaluation on the on-going SFP in Burkina Faso found that school canteens were associated with increased school enrolment, regular attendance and lower repeater rates (Moore, 1994).

Studies in Ghana show malnourished children entered school at a later age and completed fewer years of school than nourished children (Glewe & Jacoby 1994). Niger has one of the five lowest school enrolment rates in the world. The School Feeding Programme was intended to enhance attendance of nomad and transhumant families particularly girls where beneficiaries receive the equivalent of the total daily recommended food intake (2.079 kal) in three meals per day. In addition, girls' participation in school receives an additional take home ration as an incentive. Evidence from past experience with SFP in Niger show that whenever canteen are closed, immediate high absenteeism follows and children are withdrawn from schools. In areas with nomadic and transhumant populations, the school year cannot commence until food stocks arrive (WFP, 1996). Similar trends have been observed in Bangladesh where a program of School Based food distribution increased enrolment by 20 percent versus 2 percent decline in non-participating schools (Ahamed & Billa, 1994).

An analysis of World Food Programme (WFP) survey data from 32 countries in Sub-Saharan Africa (Gelli, Meir, & Espejo 2007) grouped 4,000 primary schools according to
the type and length of the School Feeding Program: those with established programs (on-site meals or take-home rations), those with programs of less than 12 months, and those that had yet to initiate a program and so could serve as proxy controls. During the first year of School Feeding assistance, absolute enrolment increased by 28 percent for girls and 22 percent for boys. After the first year, enrolment trends varied according to the type of program offered. When only on-site meals were provided, there was a change only in the first year of the program; after that the rate of absolute enrolment of girls reverted to levels similar to those before implementation. However, in the highest primary grade, with School Feeding Programs combining on-site feeding and take-home rations, girls’ absolute enrolment increased by 46 percent per year, more than twice the yearly increase in the same grade in schools implementing only on-site feeding. The provision of take-home rations appeared to support the progression of girls through the primary school grades, suggesting a reduction in the dropout rate of female students, particularly in the higher primary school grades.

Combining an in-school snack with micronutrient fortification (iron, iodine, and vitamin A precursor) in primary schools in South Africa (Van Stuijvenberg, Kvalsvig, Faber, Kruger, Kenoyer, & Benade, 1999) resulted in a fall in (diarrhea-related) absenteeism from 79 days to 52 days, an increase in attendance of approximately 15 percent.

In areas with high HIV prevalence, emerging evidence shows that School Feeding has the potential of enhancing enrolment, attendance, and progression of orphans and other vulnerable children (Edstrom, Lucas, Sabate, & Simwaka, 2008). Schools are viewed by UNESCO and UNICEF as centres for care and support for vulnerable children; hence, the
enhanced enrolment of orphans and vulnerable children would be seen as a positive impact of School Feeding.

2.5 Effects of SFP on Access and Retention of Children to Schools in Kenya

Since the inception of SFP in Kenya in 1996, studies show that there has been significant increase in terms of numbers of schools and number of children on the programme. In fact, the National Development Plan (NDP) 1974-1978 recommended that SFP be recognized as a way of distributing food to school-going children (Kimani, 1985).

In the late 1979 the short-lived milk programme led to an increase in enrolment in primary schools in the country. Abagi (1997) noted that introduction of school milk and abolition of fees in upper primary cycle increased enrollment from 2,994,849 in 1978 to 3,698,296 in 1979 which was a 23 percent increase.

According to Ngome (2002) the WFP introduced SFP in ASAL regions in Kenya in 1980 as a way of improving nutritional status of pre-primary school children, increasing attention span of the pupils and increasing enrolment. This concurs with the findings of Matoko (1988) on role of food in development of education where, he argues that school meals help improve school enrolment.

Hallack, (1990) says that according to the United Nations Development Programme (UNDP), there are five energizers of human resources development, education, health and nutrition, environmental, employment, political and economic freedoms. He notes that all are interlinked but education is the most important. He further observes that although this is true, to a hungry child in ASAL region, going to school is not as
important as having enough food to eat. The assurance of one nutritious meal a day will therefore attract children to school.

This idea is supported by World Bank (2007) which observes that low living standards is a factor that leads to low enrolment in schools because quoting Maslow’s Hierarchy of Needs, education comes a later option after food, clothing and shelter.

Due to harsh climatic conditions some families depend on relief food provided through SFP. For such families, the school is a learning place and a home. Children and parents flock schools for free food and this has led to rise in enrolment. In Kalakol girls primary in Turkana for example, enrolment in 2009 increased from 278 to 409 with most children coming to school to eat (Barto & Luchedi, 2009).

According to WFP a million vulnerable Kenyan children risked dropping out of school in 2010 due to shortage of supplies. Tesema Megash, WFP country’s director for Kenya then, said that without funding the agency would have been forced to discontinue its programme in January 2010, a situation that would have resulted to devastating consequences for children in 4000 primary schools in the country’s most food insecure regions. He said that food was a key incentive without which most of these children may have no choice but to drop out of school altogether (Barto & Luchedi, 2009).

By April 2009, the WFP scaled up the number of children it feeds in an effort to ensure that the children who might have dropped out of school due to drought resulting to food crises remain in school (Lambers, 2009b). To Lambers, chronic food insecurity and poverty reduces opportunities for children to complete primary education in many parts of Kenya. The SFP has also reduced gender parity in school attendance meaning that
meals attract more under privileged female student access class. Attendance rate in WFP schools has increased to 89% demonstrating that school feeding draws hungry children to schools (Lambers, 2009b).

Children in slums are also exposed to sexual violence, children prostitution and hence the dangers of contracting HIV and hence dropping out of school. Providing a meal in school in the slums therefore means children are less likely to be roaming in streets where they are exposed to such violence (Lambers, 2009b).

2.6 Effects of SFP on Performance

SFP also has direct impact on learning. In Jamaica providing breakfast to primary school students significantly increased attendance and arithmetic scores. The children who benefited most were those who were wasted, stunted or previously malnourished (Simeon and Grantham-McGregor, 1989). In Peru 23 malnourished and 29 well-nourished 9 to 11 years old boys were studied to assess the effects of breakfast on cognitive performance. Each boy served as his own control in a manner comparable to the Jamaica study cited above.

McConnell (2006) used the School Feeding Toolkit to design a unique comprehensive country plan for school feeding program for use in countries in Africa, Asia, Latin America and the Middle East. He found out that School Feeding had proven to be a safeguard for children around the world. It brought benefits for the child and country. Benefits for the child included increased food security; increased school attendance by motivating parents to send their children to school; improved academic achievement and improved health significantly. Benefits for the country included support for social and economic development; development of a healthy and educated future work force;
enhanced self sufficiency and reduced poverty and provided an on-going market for agricultural produce and industrial products.

Investigations in Africa point out that the underweight children grow up less clever than malnourished ones. Malnourished children have little interest in what goes on around them and end up very apathetic (Ngome, 2002). King (1972) contends that a child who is not well fed will be hungry sleepy and dull in class. In Tanzania for example, average academic performance increased from 14 percent in 2000 to 57 percent in 2009 in the schools under SFP.

A recent survey carried out by WFP show that 98% of teachers in WFP assisted primary schools in Somalia, believe that children attentiveness is also increased due to the feeding programme (Lambers, 2009a). Research also shows that SF can impact on education by increasing cognition and educational achievement (World Bank, WFP 2009).

Similar trends have been observed in Kenya. For example, Kimani, (1985) concluded that there was significant difference between children on food programme and children not on Food Programme. In her study of Othaya division, she observed that pupils in schools with lunch programme performed better and had higher marks in tests than those who did not have lunch programme.

According to Guardian Reporter (2010) the districts under SFP in Kenya had over the five previous years been ranked among the best performing districts. Del Rosso, (1999) observed that nutritional and health status is a powerful influence on a child’s learning and how well a child performs in school. Children who lack certain nutrients in their diets particularly iron and iodine or who suffer protein energy malnutrition, hunger, parasitic
infections or other diseases do not have same potential for learning as healthy and well-nourished children. Weak health, poor nutrition among school-age children diminish their cognitive development either through physiological changes or by reducing their ability to participate in learning experience or both. Del Rosso continues to say that children who are hungry common in children who are not fed before going to school can have adverse effects on learning. Such children have more difficulties concentrating and performing complex taxes and are likely to repeat grades or dropping out of school. Iron deficiency renders children restless, inattentive and uninterested in learning. Research literature suggests a causal link between iron deficiency, anemia and less optimal behaviors for learning (Van den Bosch & Bundy, 1998).

World Bank (2008) observes that SF programs provide micronutrients such as iron, iodine, vitamins A, B and Zinc through fortified foods and are combined with other school health interventions such as de-worming leading to additional benefits for children’s cognitive abilities and educational achievements. An evaluation conducted by UNESCO in 1981 on WFP projects in schools showed that malnutrition of young children can affect their intellectual capabilities.

2.7 Summary

The literature reviewed in this chapter shows that School Feeding Programmes have many benefits for school children. The programmes are in line with millennium development goals and are within EFA and UPE strategies. The two main goals of School Feeding Programmes are education and food security. The educational goals include increased attendance and enrolment and improved concentration during teaching hence higher performance. The goals of food security include reduction of short-term
hunger and improvement of the nutritional status of children, thereby reducing levels of malnutrition. Although SFP has been in operation in Isiolo, enrolment and retention trends continue to be low compared to other regions in the country. This is despite the fact that studies have shown that School Feeding Programmes result in increased enrolment and retention. This shows that there is a research gap in that none of the studies referred to in the literature review was conducted in Isiolo, which is an ASAL region. Furthermore, the lifestyle of the inhabitants of Isiolo, notably nomadic pastoralist, early marriages and the low economic status make the area unique. The study will therefore investigate the role of SFP in enhancing participation in primary education in Isiolo Central Division, and suggest possible strategies that can address the shortcomings identified in the programme.
CHAPTER THREE
RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter describes the research methodology that was used to conduct the study. It describes the design in relation to the study area, the target population and sample selecting, research instruments and administration and methods of data analysis and presentation.

3.2 Research Design

The study was a descriptive survey research and it entailed field study survey seeking to establish the effects of the School Feeding Programme on participation of children to Primary Education in Isiolo Central Division. Descriptive design involves data collection, statistics of an event, describes its nature and sometimes examines actions as they are rather than manipulation of variables (Orodho, 2008). Descriptive survey design is used in preliminary and exploratory studies to allow researchers to gather information, summarize, present and interpret it for the purpose of classification. It is on this basis that the researcher chose this design to enable the use of questionnaires to collect data in regard to the effects of School Feeding Programme on education participation in Isiolo Central Division for processing and finally drawing conclusions.

3.3 Locale of the Study

The research was conducted in Isiolo Central Division, Isiolo District, Isiolo County Eastern Province, Kenya. The County is located between longitudes 36°60' and 38°50' East and latitudes 0°5’North and 2° North. The County covers an area of 25605 Km² and
it is divided into three administrative Districts namely Isiolo, Merti and Garbatulla. The Central Division which is in Isiolo District is selected because it has the highest population compared to other Divisions in the County as shown in the table below:

Table 3.1: Population of Isiolo County

<table>
<thead>
<tr>
<th>District</th>
<th>Division</th>
<th>Area Km²</th>
<th>Population</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isiolo</td>
<td>Oldonyiro</td>
<td>1,161</td>
<td>10,772</td>
<td>8.2</td>
</tr>
<tr>
<td></td>
<td>Central</td>
<td>1,411</td>
<td>58,242</td>
<td>25.0</td>
</tr>
<tr>
<td>Merti</td>
<td>Merti</td>
<td>12,377</td>
<td>17,570</td>
<td>1.3</td>
</tr>
<tr>
<td>Garbatulla</td>
<td>Garbatulla</td>
<td>3,757</td>
<td>7,809</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>Kinna</td>
<td>2,516</td>
<td>7,947</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>Sericho</td>
<td>4,381</td>
<td>10,024</td>
<td>2.4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>25,065</td>
<td>112,364</td>
<td>3.9</td>
</tr>
</tbody>
</table>

Source: Isiolo District Strategic Plan 2005 – 2010

The Central Division has total area of 1,411 km² and has a total population of 58,242 people. It has 4 locations and two educational Zones namely East and West Zone. Isiolo was chosen because it was one of the ASAL Districts where SFP was first started by the WFP. The culture of people and their lifestyle also make it unique and therefore appropriate for the study. Crew (2012) looking at education noted that Kenya is faced with many gender and regional disparities. In North Eastern Province, Gross Enrolment Rate for girls is 29% compared to 112% in Western Province. Girls in ASAL communities are still seen as homemakers who do not deserve to go to school. Massive poverty has also crippled many families' efforts to educate their children despite introduction of free primary education. With the little resources that some families have, they prefer to send their boys to school since it is believed that they are future wealth sources to their parents than the girls, as they will be breadwinners.
Due to harsh climatic conditions in ASAL, the inhabitants of Isiolo are nomadic pastoralists and therefore they keep moving from one place to another with their animals making it difficult for their children to attend school. Cultural factors like boys’ initiation and moranism also lead to low enrolment where the circumcised junior boys either live in warrior villages or roam about the country with age mates making it almost impossible for them to attend school (Hollard, 1996). (Appendix H show the locale).

3.4 Variables

The independent variable of the study was implementation of School Feeding Program, whose indicators include how SFP is managed in the schools, the number of pupils benefiting from the program, number of target schools reached, and the quality and quantity of food provided. The dependent variable of the study was participation of children in education. The indicators of participation included enrolment rates in the schools, retention, and academic performance. There were also intervening variables, which could influence the affect of SFP on education participation. These included the challenges facing SFP such as lack of resources like food and fuel for effective implementation of the program, high poverty levels, increasing the demand for food and SFP management and leadership issues such as interference by local politicians, leadership wrangles, and misappropriation of resources.

3.5 Target Population

The population under study included the 27 primary schools in the whole of Isiolo Central Division. The study targeted the 27 head teachers, 10,375 pupils, 299 teachers and the District School Feeding Programme Officer.
<table>
<thead>
<tr>
<th>Category</th>
<th>Number in the population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of public primary schools</td>
<td>27</td>
</tr>
<tr>
<td>Number of head teachers</td>
<td>27</td>
</tr>
<tr>
<td>Number of teachers</td>
<td>299</td>
</tr>
<tr>
<td>Number of pupils</td>
<td>10,375</td>
</tr>
<tr>
<td>Number of District SFP officers</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: District Education Office Isiolo

3.6 Sampling Procedure

Sampling is a procedure in which a fraction of a group known as a sample is chosen to represent the total population about which generalization is made (Warwick, 1977). According to Mugenda and Mugenda (1999), the purpose of sampling is to secure a representative group (sample) which will enable the researcher to gain information about a population. A study can be carried out from the selected population so as to save time.

From the 27 schools in Isiolo Central Division, 20 schools were selected using simple random sampling, representing 74% of the target population. According to Gay (1976), a sample size of at least 20% of the target is considered adequate for educational research.

From each of the 20 sampled schools, purposive sampling was used to select the head teacher and the SFP teacher. To select the students, the following formula was used to calculate a sample size (n), from a given finite population (P) such that the sample was within plus or minus 0.05 of the population proportion with a 95 percent level of confidence as given by Krejcie & Morgan (1970).

\[
    n = \frac{Z^2 \times (p) \times (1-p)}{C^2}
\]
Where:  

\[ n = \text{Sample Size} \]

\[ Z = Z \text{ value (which is 1.96 for 95% confidence interval)} \]

\[ p = \text{Percentage picking a choice, given as 0.5} \]

\[ C = \text{Confidence interval, in this case 0.05} \]

The correction for finite population is then computed as follows:

\[
S = \frac{n}{1 + \frac{n-1}{P}}
\]

Where:  

\[ S = \text{the corrected sample size} \]

\[ P = \text{Population, which in this case is 10,375} \]

This gives 370, meaning that from the population of 10,375 pupils, a sample size of at least 370 should be selected. Therefore, stratified random sampling was used to select 20 pupils per school, giving a total of 400 class seven and eight pupils from the 20 sample schools. The researcher selected standard eight and seven pupils because they were easier to handle and understood the questionnaire easily. From each school, 10 boys and 10 girls were selected to ensure gender balance. In addition, the District School Feeding Programme Officer for Isiolo was selected for the study. Therefore, the study sample comprised of 20 head teachers, 20 teachers, and 400 pupils and one District School Feeding Programme Officer. Table 3.3 shows the sample distribution.
Table 3.3: Sample distribution

<table>
<thead>
<tr>
<th>Category</th>
<th>Population</th>
<th>Sample size</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head teachers</td>
<td>27</td>
<td>20</td>
<td>74.1</td>
</tr>
<tr>
<td>Teachers</td>
<td>299</td>
<td>20</td>
<td>6.7</td>
</tr>
<tr>
<td>Pupils</td>
<td>10,375</td>
<td>400</td>
<td>3.9</td>
</tr>
<tr>
<td>SFP officer</td>
<td>1</td>
<td>1</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10,702</strong></td>
<td><strong>441</strong></td>
<td><strong>4.1</strong></td>
</tr>
</tbody>
</table>

*Source: District Education Office Isiolo*

3.7 Data Collection Instruments

In this study, two research instruments were used; these are questionnaires and interview schedule which are the most common instruments for data collection. Questionnaire is more efficient as it requires less time, less expensive and permit data collection from a much larger sample (Gay, 1976).

A personally administered questionnaire has an advantage of establishing rapport with respondents and hence being able to get information required quite easily. There was a questionnaire for pupils, teachers and the Head teachers. The questionnaire was used to get the general background information about the school from head teachers, teachers and pupils. It was also used to collect information about implementation of SFP, effects of SFP on education access, retention and performance, highlight some of the challenges facing the programme and how it can be improved.

An interview schedule was used in a face-to-face interview with SFP Officer. An Interview schedule has an advantage of establishing rapport with the respondents, provide an opportunity to explain the purposes of the study, clarify individual item hence
it gives an accurate honest response. The Interview schedule was used to supplement the questionnaires where the respondents were required to freely give response and the interviewer clarified questions and probe further where necessary.

3.8 Pilot Study

The researcher conducted a pilot study in two public primary schools within Isiolo Central Division. These two schools were not involved in the actual study. Piloting helped to determine validity and reliability of the research instruments and also allow the researcher to create familiarity with the instrumentation. The pilot study was also used to identify any items in the questionnaire that are ambiguous or unclear to the respondents and change them effectively.

3.8.1 Validity

Validity is the accuracy and meaningfulness of inferences, which are based on the research results (Gay, 1976). It is the degree to which results obtained from the analysis of the data actually represents the phenomena under study. The research instrument was validated through application of content validity procedures. Content validity is established and improved by expert judgment where university supervisors are resourceful. Therefore, the researcher, with guidance from her supervisor, estimated the degree of coherence of the responses for each instrument.

3.8.2 Reliability

Reliability measures the extent to which an instrument will consistently yield the same results after being administered severally to the same respondents (Orodho 2008). The research instruments were piloted in order to assess their reliability. Two schools in the
district were selected for piloting the instruments. The researcher used the test-retest reliability to compute the coefficient. The questionnaires were given to the respondents to fill in, and then after one week, the same questionnaires were again administered to the same respondents. Then the scores were correlated using Pearson Product-Moment Correlation formula to determine the reliability coefficient. The researcher accepted reliability of items at a correlation coefficient of 0.7, which is recommended by Kiess and Bloomquist (1985).

3.9 Data Collection

The researcher obtained a research permit from the MoE headquarters and visited the DEO Isiolo for further clearance after which she visited the various head teachers of all primary schools, for the administration of the questionnaires. Questionnaires were administered to the respective head teachers, teachers and pupils by the researcher who personally visited schools. Prior arrangements with the head teachers on the most appropriate date and time were made for the visit. All the respondents were assured of confidentiality of information given. The questionnaires were collected after one week. The researcher also collected data from the Isiolo District SFP officer in a face-to-face interview.

3.10 Data Analysis and Presentation

After all the data was collected, data cleaning was done in order to determine inaccurate, incomplete, or unreasonable data and then improve the quality through correction of detected errors and omissions. After data cleaning, the data was coded and entered in computer for analysis using the Statistical Package for Social Sciences (SPSS) version 17. Data analysis procedures employed involved both quantitative and qualitative
procedures. Quantitative data was analysed using descriptive statistics such as frequency counts and percentages. Qualitative data was analyzed qualitatively using content analysis based on analysis of meanings and implications emanating from respondent information and comparing responses to documented data on School Feeding Programme and its effects on participation. The qualitative data was presented thematically in line with the objectives of the study.
CHAPTER FOUR
DATA ANALYSIS PRESENTATION OF RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents data analysis and discussion of the study findings. The general objective of the study was to assess whether the SFP has enhanced participation of children in primary education in Isiolo Central Division. The specific objectives of the study were to: find out the School Feeding Programme implementation strategies employed in public primary education in Isiolo Central Division, investigate the extent to which School Feeding Programme has affected enrolment trends, assess the effects of School Feeding Programme on retention in public primary schools in Isiolo Central Division and investigate the extent to which School Feeding Programme has affected performance of pupils in public primary schools.

4.2 Background Data of the Respondents

The study participants comprised of from 20 headteachers, 20 teachers, and 400 pupils and one District School Feeding Programme Officer. Out of the 20 teachers who participated in the study, 11 (55.0%) were female while 9 (45.0%) were male. This implies that majority of the participants in the study were female teachers. On the other hand, among the pupils, there were 200 (50.0%) boys and 200 (50.0%) girls.

4.3 School Feeding Programme Implementation in Schools

The first objective of the study was to find out how the school feeding programme was being implemented in public primary schools in Isiolo Central Division. One hundred percent of the teachers and headteachers agreed that all pupils took the school feeding
programme lunch. Pupils were further asked whether they were in the school feeding programme where all reported that they were in the programme. The headteachers and teachers were asked to indicate whether since inception of school feeding in their schools there had been improvements in various aspects of the programme as shown in Table 4.1.

**Table 4.1: Improvement in aspects of SFP**

<table>
<thead>
<tr>
<th>Aspects of SFP</th>
<th>Headteachers</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Improved</td>
<td>Not Improved</td>
</tr>
<tr>
<td></td>
<td>f  %</td>
<td>f  %</td>
</tr>
<tr>
<td>The number of children served</td>
<td>16  80.0</td>
<td>4  20.0</td>
</tr>
<tr>
<td>Amount of food served</td>
<td>15  75.0</td>
<td>5  25.0</td>
</tr>
<tr>
<td>Consistency in food supply</td>
<td>15  75.0</td>
<td>5  25.0</td>
</tr>
<tr>
<td>Facilities for food preparation</td>
<td>16  80.0</td>
<td>4  20.0</td>
</tr>
<tr>
<td>Community participation in SFP</td>
<td>12  60.0</td>
<td>8  40.0</td>
</tr>
</tbody>
</table>

As shown in table 4.1 all the teachers and 80% of the headteachers reported that their schools had recorded an increase in the number of children served through SFP. Majority of the respondents also indicated that the other aspects of school feeding programme had improved, including the amount of food served, consistency in food supply, facilities for food production and increased community participation in SFP. This is a clear indication that all the aspects of SFP had improved, suggesting that SFP has been gaining support from communities and the schools. Interviews with the SFP officer revealed that there were positive attitudes by parents, community and pupils toward the school feeding programme, a view that was supported by teachers and headteachers.
The study established that 358 (89.5%) of the pupils liked the food they were given at school while only 42 (10.5%) indicated that they did not like some of the food. This implies that a large proportion of the pupils liked the food provided in the schools. All pupils indicated that the feeding programme was important to them, giving the reasons reported in Table 4.2.

**Table 4.2: Reasons why SFP is important to pupils**

<table>
<thead>
<tr>
<th>Reasons for importance of SFP</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannot afford food (lunch) at home</td>
<td>135</td>
<td>33.8</td>
</tr>
<tr>
<td>There is no enough food at home</td>
<td>111</td>
<td>27.8</td>
</tr>
<tr>
<td>The distance is too long to go for lunch</td>
<td>91</td>
<td>22.8</td>
</tr>
<tr>
<td>The parent/guardian is not available to prepare lunch</td>
<td>63</td>
<td>15.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>400</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.2 illustrates pupils’ response on the importance of SFP, whereby 135 (33.8%) reported that they could not afford lunch at home, 11 (27.8%) did not have enough food at home while 91 (22.8%) could not go home for lunch because they had a long distance to cover. A further proportion of 15.8% reported that there was no one available to prepare lunch for them at home. These are some of the reasons given for frequent absenteeism and dropout of pupils from schools. For example, the Report of the Sector Review and Development Direction (MoEST, 2003) gave some of the factors associated with absenteeism as long distances between home and school, poverty and hunger. Pupils also cited one of the reasons why SFP is important as the fact that their parents and guardians were not available to prepare lunch. This is in agreement with an article in the Daily Nation 2009, 15th September that in areas like North Horr, pastoralists had moved to
Ethiopia with their children while parents in Isiolo had moved to Mount Kenya region due to insecurity.

Table 4.3 shows the type of food served to pupils.

Table 4.3: Type of food served to pupils

<table>
<thead>
<tr>
<th>Type of food served</th>
<th>Headteachers</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Same type unbalanced diet always</td>
<td>11</td>
<td>55.0</td>
</tr>
<tr>
<td>Varied types but balanced</td>
<td>7</td>
<td>35.0</td>
</tr>
<tr>
<td>Same type balanced diet always</td>
<td>2</td>
<td>10.0</td>
</tr>
<tr>
<td>Varied types but unbalanced</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.3 indicates that 55.0% of the headteachers agreed that pupils were given the same type of diet always and was unbalanced; 65.0% of the teachers and 35% of headteachers indicated they served varied types of balanced meals; 10% of headteachers and 25% of teachers indicated same type balanced diet always, while 10% of the teachers indicated they served varied types of unbalanced diet always. This shows that the schools were striving to ensure they served balanced diet to pupils. This is in line with previous studies which have shown that taking balanced diet that is nutritious is an important factor for physical and mental development in childhood years (Bryan, Osendarp, Hughes, Calvaresi, Baghurst, Van Klinken 2004). Another study by Del Rosso (1999) also agrees with the above findings that nutritional and health status is a powerful influence on a child’s learning and how well a child performs in school.
The study further established that 86.3% of the pupils were of the view that the amount of food given to them at school was enough while 13.7% indicated that it was too little. This implies that most of the pupils were satisfied with the amount of food given to them. As shown in Figure 4.1, an overwhelming majority (97.5%) of the pupils were of the view that SFP should continue in their schools.

![Figure 4.1: Pupils' views on whether SFP should continue](image)

With only 2.5% of the pupils indicating that SFP should stop, it emerges that the programme had an overwhelming support from pupils, suggesting they view it as an important aspect of the schooling process.

Another aspect of the SFP implementation addressed by the study is community participation in the programme. Community participation is important for SFP to become
sustainable. Consequently, the headteachers and teachers were asked to indicate how the local community and parents are involved in the implementation of SFP, to which they responded as shown in Table 4.4.

**Table 4.4: Participation of the local community and parents**

<table>
<thead>
<tr>
<th>Participation</th>
<th>Headteachers</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Membership in SFP committee</td>
<td>20</td>
<td>100.0</td>
</tr>
<tr>
<td>Provision of fuel (firewood, kerosene)</td>
<td>14</td>
<td>70.0</td>
</tr>
<tr>
<td>Volunteer labour</td>
<td>3</td>
<td>15.0</td>
</tr>
<tr>
<td>Provision of food (maize, beans, flour)</td>
<td>1</td>
<td>5.0</td>
</tr>
<tr>
<td>Financial contribution</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

As shown in Table 4.4, the headteachers and teachers were in agreement that the community and parents participated in SFP implementation through membership in SFP committees, provision of fuel (firewood and kerosene) and volunteering labour. MoE and WFP (2007) noted that the SFP is directly managed at the school level by SMC and SFC. However, it emerged that members of the community and parents did not fully participate through provision of food items and financial contributions toward implementation of SFP. Out of 20 headteachers, 17 (85.0%) reported that the food provided to the school was adequate while 3 (15.0%) disagreed. The sources of food for school feeding programme were the Government, the school farm and donors such as churches and NGOs. The Government was rated as the main source of food while the school farm and donors were rated as the least sources of food. This is in line with USDA (2009) which
stated that WFP is gradually handing over its SFP to the Government of Kenya. The results presented above imply that primary schools in Isiolo Central Division were effectively implementing the SFP in many aspects. However, as reported by all the 20 (100%) headteachers, the School Feeding Programme had at some instances been interrupted due to lack of food, fuel and other resources. All the headteachers (100%) further concurred that the interruption affected school attendance in that it led to pupils being absent from school, pupils could not concentrate in class due to hunger and there was a high drop out rate of pupils from schools. This concurs with a study by Ahamed and Billa (1994) that in Niger when canteens are closed, immediate and high absenteeism follows and children are withdrawn from school and that in nomadic and transhumant population, the school year cannot commence until foods stocks arrive.

A proportion of 70.0% of the headteachers and 75% of the teachers agreed that there had been incidences when there was a shortfall in the expected food rations. Table 4.5 shows the measures taken by schools to counter the problem of shortage of food for the SFP.

Table 4.5: Measures taken to counter shortfall of food

<table>
<thead>
<tr>
<th>Measures taken</th>
<th>Headteachers</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Ask parents to subsidize</td>
<td>13</td>
<td>65.0</td>
</tr>
<tr>
<td>Organize fundraisings</td>
<td>12</td>
<td>60.0</td>
</tr>
<tr>
<td>Buy from suppliers</td>
<td>4</td>
<td>20.0</td>
</tr>
<tr>
<td>Ask teachers to contribute</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>
Table 4.5 illustrates that the headteachers and teachers were in agreement that when their schools encountered shortfalls in food supply, they asked parents to subsidize or organized fundraisings. Other measures taken included buying food from suppliers and asking teachers to contribute, but these took place in just a couple of schools. To make SFP more sustainable, there is need to involve the community in management of the programme. Introducing Home-grown school feeding (HGSF) can also help address some of the problems. HGSF offers food produced and purchased within the surroundings of a consumer. Government sends money directly to the targeted schools to purchase food. A HGSF programme aims to both increase children’s well-being and promote local agricultural production and development by providing an ongoing market for small landholders.

The following were given by headteachers and teachers as the challenges experienced during the implementation of School Feeding Programme in schools: sometimes food is not enough to go for the whole term, lack of water, unwillingness by parents to cost-share in matters like fuel provision, repairs, poor roads that hinder provision of food, food insecurity due to theft, poor storage facilities and lack of fuel. Strategies suggested to improve School Feeding Programme include: drilling a borehole in the schools, parents being sensitized on their roles and responsibilities, improve road networking, placing up a modern kitchen and stores to store food and that the government should pay the school cooks.

4.4 Effects of School Feeding Programme on Enrolment Trends

The second objective of the study was to investigate the extent to which School Feeding Programme has affected enrolment trends in Isiolo Central division. To address this
objective, the school enrolment trends were compared for the period 2005 and 2010 for each of the participating schools. The change in enrolment for this period was computed by taking enrolment in 2010 minus enrolment in the year 2005. Table 4.6 shows the results obtained.

As shown in Table 4.6, the school recording the highest increase in enrolment for the period 2005 – 2010 registered an increment of 284 pupils, including 118 boys and 166 girls. On the other hand, there was a school that registered a decline of 309 in enrolment, with boys reducing by 190 and girls by 119 for the six-year period. The table also shows that while all the schools registered a total enrolment growth of 369 boys for the period, girls declined by 517, resulting in a total decline of 148 pupils for this period.

Table 4.6 Change in enrolment trends (2005 – 2010)

<table>
<thead>
<tr>
<th>School code</th>
<th>Change in enrolment of Boys</th>
<th>Change in enrolment of Girls</th>
<th>Overall change</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>118</td>
<td>166</td>
<td>284</td>
</tr>
<tr>
<td>B</td>
<td>121</td>
<td>94</td>
<td>215</td>
</tr>
<tr>
<td>C</td>
<td>211</td>
<td>2</td>
<td>213</td>
</tr>
<tr>
<td>D</td>
<td>115</td>
<td>88</td>
<td>203</td>
</tr>
<tr>
<td>E</td>
<td>76</td>
<td>99</td>
<td>175</td>
</tr>
<tr>
<td>F</td>
<td>119</td>
<td>44</td>
<td>163</td>
</tr>
<tr>
<td>G</td>
<td>76</td>
<td>62</td>
<td>138</td>
</tr>
<tr>
<td>H</td>
<td>20</td>
<td>31</td>
<td>51</td>
</tr>
<tr>
<td>I</td>
<td>76</td>
<td>-57</td>
<td>19</td>
</tr>
<tr>
<td>J</td>
<td>153</td>
<td>-147</td>
<td>6</td>
</tr>
<tr>
<td>K</td>
<td>28</td>
<td>-36</td>
<td>-8</td>
</tr>
<tr>
<td>L</td>
<td>-42</td>
<td>10</td>
<td>-32</td>
</tr>
<tr>
<td>M</td>
<td>94</td>
<td>-150</td>
<td>-56</td>
</tr>
<tr>
<td>N</td>
<td>-67</td>
<td>-64</td>
<td>-131</td>
</tr>
<tr>
<td>O</td>
<td>-12</td>
<td>-147</td>
<td>-159</td>
</tr>
<tr>
<td>P</td>
<td>-120</td>
<td>-84</td>
<td>-204</td>
</tr>
<tr>
<td>Q</td>
<td>-67</td>
<td>-142</td>
<td>-209</td>
</tr>
<tr>
<td>R</td>
<td>-178</td>
<td>-57</td>
<td>-235</td>
</tr>
<tr>
<td>S</td>
<td>-162</td>
<td>-110</td>
<td>-272</td>
</tr>
<tr>
<td>T</td>
<td>-190</td>
<td>-119</td>
<td>-309</td>
</tr>
<tr>
<td>Total</td>
<td>369</td>
<td>-517</td>
<td>-148</td>
</tr>
</tbody>
</table>
The teachers and headteachers were asked to rate the extent to which the current pupils’ enrolment could be attributed to availability of School Feeding Programme. Their responses are shown in Figure 4.2.

![Bar chart showing the extent to which the current pupils' enrolment could be attributed to availability of School Feeding Programme.](image)

**Figure 4.2: Effect of SFP on Enrolment**

As shown in Figure 4.2, most of the headteachers and teachers were of the view that SFP had affected enrolment to a great extent while a significant proportion indicated that SFP had no effect on enrolment. This implies that, while the school feeding programme has led to an increase in enrolment in some schools, in others there have been decline in enrolment, especially for girls in spite of the School Feeding Programme. However, the SFP officer reported that even in schools recording reduced enrolment, the rates would have been lower if there were no SFP. This therefore shows that SFP has had an impact on enrolment in the schools, which is in line with earlier findings by Ngome (2002) and Matoko (1988) on role of food in development of education where they argue that schools meals help improve school enrolment.
The pupils were asked whether there were children in their schools who did not attend school when lunch was not offered. In response, 335(83.8%) agreed that indeed there were some children in their schools who did not attend school when lunch was not offered while 65(16.3%) responded to the contrary. This implies that there were a large proportion of children who would not attend school if lunch was not provided to them. It therefore emerges that the introduction of SFP led to increase in enrolment and retention in some schools -in Isiolo, a fact that was supported by the SFP officer during face-to-face interview. Studies in different parts of the world have reported similar findings. One study done in Japan for example revealed that Tokyo children who were fed on 200 milliliters of milk daily for six months attended school regularly. In Santiago Rodriguez, a poor area in North West Dominican Republic, termination of SFP adversely affected enrolment which dropped from 23 to 14 percent between 1980 and 1982 when the program was not in operation (Ngome, 2002).

4.5 School Feeding Programme and Access and Retention

The third objective of the study was to assess the effects of School Feeding Programme on retention in public primary schools in Isiolo Central Division. All teachers and headteachers confirmed that there were pupils who miss school when food rations are exhausted. Additionally, headteachers were asked whether there were school age children in the neighborhood who did not attend school, to which 16 (80%) reported there indeed were. In concordance, all the pupils (100%) confirmed that they had friends or siblings who had dropped out of school. Table 4.7 indicates reasons given by pupils why their friends had dropped out of school.
Table 4.7: Pupils’ views on reasons for dropout

<table>
<thead>
<tr>
<th>Reasons for dropout</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty</td>
<td>233</td>
<td>58.3</td>
</tr>
<tr>
<td>Lack of food</td>
<td>76</td>
<td>19.0</td>
</tr>
<tr>
<td>Lack of interest</td>
<td>56</td>
<td>14.0</td>
</tr>
<tr>
<td>Cultural practices</td>
<td>35</td>
<td>8.8</td>
</tr>
<tr>
<td>Total</td>
<td>400</td>
<td>100.0</td>
</tr>
</tbody>
</table>

As shown in table 4.7, majority of the pupils indicated that their friends/siblings had dropped out from school due to poverty. Other factors causing school dropout according to pupils included lack of food, lack of interest in school and cultural practices such as early marriages and female genital mutilation. This implies that the main reason as to why students dropped out of school was due to poverty, which is a major cause of lack of food. Isiolo is one of the districts in ASAL areas and most of the population lives in utter poverty. An economic survey conducted in 2007 revealed that Isiolo district had 71.3% of the rural population living below poverty line and it was ranked the tenth poorest district in Kenya (GoK 2007). Parents therefore opt not to take their children to school because of higher opportunity cost (Ngome 2002). This situation is worsened by natural calamities like draught, floods, tribal conflicts and seasonal migration of people with their animals. According to GoK (2005a) the SFP was therefore introduced to ensure that children are healthy well fed and able to learn. Good health and nutrition increases enrolment and stabilizes attendance of most disadvantaged children especially girls.

Additionally, teachers and headteachers were asked to give their opinions on the major causes of school drop out in their schools. Table 4.8 summarizes their responses.
Table 4.8: Teachers and headteachers’ views on reasons for dropout

<table>
<thead>
<tr>
<th>Reasons for dropout</th>
<th>Headteachers</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Lack of parental support</td>
<td>19</td>
<td>95.0</td>
</tr>
<tr>
<td>Poverty</td>
<td>17</td>
<td>85.0</td>
</tr>
<tr>
<td>Lack of food</td>
<td>7</td>
<td>35.0</td>
</tr>
<tr>
<td>Indiscipline</td>
<td>6</td>
<td>30.0</td>
</tr>
<tr>
<td>Lack of interest in education</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Table 4.8 shows that according to the headteachers and teachers, the main causes of school dropout were lack of parental support and poverty. Other causes that were mentioned included lack of food, indiscipline and lack of interest in education. This implies that the main reason as to why pupils dropped out of school was due to poverty.

In addition, all the 20 (100%) teachers and 20 (100%) headteachers indicated that SFP had improved the retention of pupils in their schools by minimizing the number of dropouts in the schools. The SFP officer concurred with the headteachers’ and teachers’ views.

4.6 School Feeding and Academic Performance

The forth objective of the study was to investigate the extent to which School Feeding Programme has affected performance of pupils in public primary schools. All teachers and headteachers agreed that the school feeding programme had affected the pupils’ academic performance in their schools and that it was a positive effect. This implies that
the school feeding programme had helped in upgrading the pupils’ performance. Table 4.9 indicates the marks which the pupils had scored in the end of term examinations.

Table 4.9: Marks obtained in end of term exams

<table>
<thead>
<tr>
<th>Marks obtained</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>201-250</td>
<td>149</td>
<td>37.3</td>
</tr>
<tr>
<td>251-300</td>
<td>126</td>
<td>31.5</td>
</tr>
<tr>
<td>300-350</td>
<td>69</td>
<td>17.3</td>
</tr>
<tr>
<td>Below 200</td>
<td>43</td>
<td>10.8</td>
</tr>
<tr>
<td>351-400</td>
<td>11</td>
<td>2.8</td>
</tr>
<tr>
<td>Over 400</td>
<td>2</td>
<td>.5</td>
</tr>
<tr>
<td>Total</td>
<td>400</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.9 indicates pupils’ responses on the marks they had obtained in the end of term’s examinations. The table shows that 37.3% of the pupils had scored between 201-250 marks while 31.5% had scored 251-300 marks. This shows that majority of the pupils were scoring low marks of below 300. Figure 4.7 illustrates pupils’ response on the extent to which the SFP had helped improve their academic performance.
Figure 4.3 Effects of SFP on academic performance

Figure 4.7 indicates that out of 400 pupils, 47.5% reported that SFP had helped them very much, 45.8% indicated it had helped them much while 6.7% reported that it had helped them just a little to improve academic performance. This implies that for most of the pupils, school feeding programme had played a big role in improving pupils’ academic performance. All the headteachers and teachers agreed that SFP had improved academic performance of pupils to a great extent, a view that was supported by the SFP officer.

The pupils were asked to give their opinions on what they would do without the lunch programme in school, to which they responded as shown in Table 4.10 indicates their responses.
Table 4.10: What would happen without SFP

<table>
<thead>
<tr>
<th>Responses</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would perform poorly in exams</td>
<td>248</td>
<td>62.0</td>
</tr>
<tr>
<td>My academic performance would remain the same</td>
<td>137</td>
<td>34.3</td>
</tr>
<tr>
<td>I am not sure</td>
<td>15</td>
<td>3.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>400</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.10 shows that 248 (62.0%) of the pupils reported that they would perform poorly in exams if they did not have the lunch programme in their school, 137 (34.3%) would not change in their academic performance while 15 (3.8%) were not sure what would happen. This implies that majority of the pupils would drop in performance due to hunger since they cannot concentrate in class. This is in agreement with previous research by Kimani (1985) who concluded that there was significant difference in performance between children on food programme and children not on Food Programme. In her study of Othaya division, she observed that pupils in schools with lunch programme performed better and had higher marks in tests than those who did not take lunch programme. All teachers and headteachers agreed that they would associate the performance trend in their schools to a great extent with the school feeding programme.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter covers the summary of the study, conclusions and recommendations arrived at, as well as suggestions for further studies. The main purpose of the study was to assess whether the SFP has enhanced participation of children in primary education in Isiolo Central Division. The study focuses on; the School Feeding Programme implementation strategies employed in public primary education in Isiolo Central Division, the extent to which School Feeding Programme has affected enrolment trends, effects of School Feeding Programme on retention in public primary schools in Isiolo Central Division and the extent to which School Feeding Programme has affected performance of pupils in public primary schools.

5.2 Summary of the Study Findings

The study targeted 20 teachers, 400 pupils, 20 headteachers and one District School Feeding Programme Officer all whom participated giving a questionnaire return rate of 100.0%. Given below is a summary of the main study findings.

The study found out that one hundred percent of the teachers and headteachers agreed that all pupils took the School Feeding Programme lunch. Pupils were further asked whether they were in the School Feeding Programme where all reported that they were in the programme. All the teachers and 80% of the headteachers reported that their schools had recorded an increase in the number of children served through SFP. Majority of them also indicated that the other aspects of school feeding programme had improved, including the amount of food served, consistency in food supply, facilities for food
production and increased community participation in SFP. This is a clear indication that all the aspects of SFP had improved, suggesting that SFP has been gaining support from communities and the schools value the role of the programme in the schools. Interviews with the SFP officer revealed that there were positive attitudes by parents, community and pupils toward the School Feeding Programme, a view that was supported by teachers and headteachers.

The study established that 358 (89.5%) of the pupils liked the SFP food they are given at school while only 42(10.5%) indicated that they did not like some of the food. This implies that a large proportion of the pupils liked the food provided in the schools. All pupils indicated that the feeding programme was important to them. One hundred and thirty five (33.8%) of the pupils reported that they could not afford lunch at home, 11(27.8%) did not have enough food at home while 91(22.8%) could not go home for lunch because they had a long distance to cover. A further proportion of 15.8% reported that there was no one available to prepare lunch for them at home. These are some of the reasons given for frequent absenteeism and dropout of pupils from schools. With only 2.5% of the pupils indicating that SFP should stop, it emerges that the programme had an overwhelming support from pupils, suggesting they view it as an important aspect of the schooling process. The sources of food for School Feeding Programme were the Government, the school farm and donors such as churches and NGOs. The Government was rated as the main source of food while the school farm and donors were rated as the least sources of food.

The school recording the highest increase in enrolment for the period 2005 – 2010 registered an increment of 284 pupils, including 118 boys and 166 girls. On the other
hand, there was a school that registered a decline of 309 in enrolment, with boys reducing by 190 and girls by 119 for the six-year period. It was established that while all the schools registered an enrolment growth of 369 boys for the period, girls declined by 517, resulting in a decline of 148 pupils for this period. Most of the headteachers and teachers were of the view that SFP had affected enrolment to a great extent while a significant proportion indicated that SFP had no effect on enrolment. This implies that, while the School Feeding Programme has led to an increase in enrolment in some schools, in others there have been decline in enrolment, especially for girls in spite of the school feeding programme. However, the SFP officer reported that even in schools recording reduced enrolment, the rates would have been lower if there were no SFP. This therefore shows that SFP has had an impact on enrolment in the schools. The pupils were asked whether there were children in their schools who did not attend school when lunch was not offered. In response, 335(83.8%) agreed that indeed there were some children in their schools who did not attend school when lunch was not offered while 65(16.3%) responded to the contrary. This implies that there were a large proportion of children who would not attend school if lunch was not provided to them. It therefore emerges that the introduction of SFP led to increase in enrolment and also retention of children to schools in Isiolo.

All teachers and headteachers confirmed that were pupils who miss school when food rations are exhausted. Additionally, headteachers were asked whether there were school age children in the neighborhood who did not attend school, to which 16 (80%) reported there indeed were. In concordance, all the pupils (100%) confirmed that they had friends or siblings who had dropped out of school. Majority of the pupils indicated that their
friends/siblings had dropped out from school due to poverty. Other factors causing school dropout according to pupils included lack of food, lack of interest in school and cultural practices such as early marriages and female genital mutilation. This implies that the main reason as to why students dropped out of school was due to poverty, which is a major cause of lack of food. Isiolo is one of the districts in ASAL areas and most of the population lives in utter poverty. According to the headteachers and teachers, the main causes of school dropout were lack of parental support and poverty. Other causes that were mentioned included lack of food, indiscipline and lack of interest in education. This implies that the main reason as to why pupils dropped out of school was due to poverty.

In addition, all the 20 (100%) teachers and 20 (100%) headteachers indicated that SFP had improved the retention of pupils in their schools by minimizing the number of dropouts in the schools.

All teachers and headteachers agreed that the school feeding programme had affected the pupils’ academic performance in their schools and that it was a positive effect. This implies that the school feeding programme had helped in upgrading the pupils’ performance. Thirty seven point three percent (37.3%) of the pupils had scored between 201-250 marks while 31.5% had scored 251-300 marks. This shows that majority of the pupils were scoring low marks of below 300. Out of 400 pupils, 47.5% reported that SFP had helped them very much, 45.8% indicated it had helped them much while 6.7% reported that it had helped them just a little to improve academic performance. This implies that for most of the pupils, school feeding programme had played a big role in improving pupils’ academic performance. All the headteachers and teachers agreed that
SFP had improved academic performance of pupils to a great extent, a view that was supported by the SFP officer.

5.3 Conclusions

Based on the findings of the study as summarized above, it can be concluded that SFP had a positive influence on participation of pupils in public primary education in Isiolo Central division. It can be concluded that SFP had led to increase in enrollment and retention of pupils, and had led to improvement in their academic achievement. It can also be concluded that the SFP implementation strategies in schools in Isiolo had greatly improved, especially the amount of food served, consistency in food supply, facilities for food production and increased community participation in SFP. The study concludes that the school feeding programme has led to an increase in enrolment in most schools, although in others there were still decline in enrolment, especially for girls in spite of the school feeding programme. However, it emerged that even in schools recording reduced enrolment, the rates would have been lower if there were no SFP, thus showing that SFP had a positive impact on enrolment of pupils in Isiolo. For most of the pupils, school feeding programme had played a big role in improving pupils’ academic performance, since majority of the pupils would drop in performance due to hunger, and they could not concentrate in class. Another conclusion of the study is that poverty was the main reason as to why pupils dropped out of school.
5.4 Recommendations

(i) The government should ensure that there is proper and regular feeding programme in all public primary schools in Isiolo Central Division and should provide more support for the feeding programmes

(ii) The local leaders should educate parents on the importance of sending their children to school, whether there is feeding programme or not.

(iii) The government should deliver food timely in order to avoid shortages and also cushion schools from the escalating food prices by giving them some additional funds when the prices shoot up unexpectedly, to ensure that adequate quality food is purchased.

5.5 Areas for Further Research

It is hoped that researchers will consider the following suggestions for further research;

(i) A study should be conducted on causes of low girls’ enrolment in ASAL regions.

(ii) A comparative study on access and retention between schools offering SFP and those not offering.
REFERENCES


of disadvantaged students. The Cochrane Library Issue 1


World Food Programme (1996). *Niger Aid To Primary Schools in Nomad and Transhumant Areas* (Unpublished).


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APPENDIX A

PUPILS’ QUESTIONNAIRE

This questionnaire is supposed to collect information about yourself and your school. For the purpose of keeping the information confidential your name is not required. You are requested to answer questions correctly and honestly by ticking or filling in. All information will be held in confidence.

Section A: Background Information

School ........................................
Class ........................................

1. Your Gender  Male [ ]  Female [ ]
2. Age in years  6-10 [ ]  10-12 [ ]  13-15 [ ]  16 and above [ ]
3. Home distance from school
   Less than 1-5Km [ ]
   10-15Km [ ]
   5-10Km [ ]
   More than 16Km [ ]

Section B: School Feeding Programme and participation in school

4. Are you on the School Feeding Programme?
   Yes [ ]  No [ ]

5. For how long have you been eating school lunch?
   Less than an year [ ]
   2-3 years [ ]
   4-5 years [ ]
   6-7 years [ ]

6. Do you like the food given?
   Yes [ ]  No [ ]

7. Do you think the lunch programme is important to you?
   Yes [ ]  No [ ]
8. If Yes, why? Tick one of the following
   [ ] There is no enough food at home.
   [ ] The distance to home is too long to go for lunch
   [ ] The parent/guardian is not available to prepare lunch
   [ ] Cannot afford food (lunch) at home

9. The food given is.....
   Too much [ ]       Enough [ ]       Too little [ ]

10. Would you like the school programme to continue or stop?
    To Continue [ ]          To stop [ ]

11. Without the lunch programme,
    I will come to school [ ]
    I will not come to school [ ]
    I am not sure [ ]

12. Are there some of you brothers or sisters who went to school and then dropped out?
    Yes [ ]        No [ ]
    Please give reasons
    Lack of food [ ]       Poverty [ ]       Lack of interest [ ]
    Cultural practices [ ]

13. Are there some of the children in your school who do not attend school when lunch is not offered in school?
    Yes [ ]        No [ ]

14. If there is no lunch provided in school where do you take your lunch?
   (i) Go home for lunch
   (ii) Carry my lunch
   (iii) Stay without lunch
   (iv) Any other specify .................................................................

15. How many marks did you obtain in last term’s end-of-term examinations?
16) To what extent would you say that school feeding has helped you improve your academic performance?

[ ] Very much  [ ] Much  [ ] A little  [ ] Not at all

17) Without the lunch programme in school,

[ ] I would perform poorly in examinations  
[ ] My academic performance would remain the same  
[ ] I am not sure
APPENDIX B

TEACHERS' QUESTIONNAIRE

The purpose of this questionnaire is to collect information on School Feeding Programme and participation to education in Isiolo Central Division. All the information will be held in confidence.

Section A: Background Information

1. School .................................................................

2. What is your gender? male [ ] female [ ]

3. Indicate your age below 25 [ ] 26 - 35 [ ] 36 - 45 [ ] 46 - 55 [ ] 56 plus [ ]

Section B: Implementation of School Feeding Programme

4. Do all pupils take the School Feeding Programme lunch?
   yes [ ] no [ ]
   If not where do they eat lunch?
   Carry food from home [ ] [ ] stay without lunch
   buy from shops [ ] others specify ........................................

5. In the table below indicate whether the following aspects of SFP have improved.

<table>
<thead>
<tr>
<th>Statement</th>
<th>I</th>
<th>NI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of food served has improved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>We have improved the quality the number of children served</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community participation has increased</td>
<td></td>
<td></td>
</tr>
<tr>
<td>We have ensured consistency in food supply</td>
<td></td>
<td></td>
</tr>
<tr>
<td>We have improved facilities for food preparation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. What has been the attitude of parents, community and pupils toward School Feeding Programme?

(a) Parents: positive .................... negative ....................

(b) Pupils: positive .................... negative ....................

(c) Community positive .................... negative ....................

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7. Are there incidences when the School Feeding Programme has been interrupted or stopped since year 2005? Yes [ ] No [ ]

8. Did such interruption affect school attendance? No [ ] Yes [ ]
   If yes, how?
   [ ] Led to absenteeism   [ ] Lack of concentration due to hunger
   [ ] Dropout            [ ] No effects

9. (a) Are there incidences when there is a shortfall in the expected rations?
   Yes [ ] No [ ]

   (b) If yes, what does the school do to counter the problem?
   [ ] Ask parents to subsidize   [ ] Ask teachers to contribute
   [ ] Buy from suppliers       [ ] Organize fundraising drives
   [ ] Others specify ..........................................................

10. What type of food is served to the pupils?
    [ ] Same type balanced diet always   [ ] Same type unbalanced diet always
    [ ] Varied types but balanced       [ ] Varied types but unbalanced

11. How is the local community and parents involved in the implementation of school feeding programme?
    [ ] Volunteer labour
    [ ] Provision of food items (e.g. maize, beans, flour)
    [ ] Provision of fuel (firewood, kerosene)
    [ ] Membership in SFP Committee
    [ ] Financial contribution
    Others (specify)..........................................................

12. Is the amount of food provided to the school adequate?
    Yes [ ] No [ ]

13. What are the main sources of food for School Feeding Programme?
    Government [ ] Community/parents [ ] School farm [ ]
    Donors (church, NGOs) [ ]
    Others Specify ..........................................................
Section C: School Feeding Programme and Participation and Retention

14. Are there some pupils who miss school when food rations are exhausted?
   Yes [ ] No [ ]

15. Are there school-age children in the neighborhood who do not attend school?
   Yes [ ] No [ ]
   If yes what are the reasons?
   Traditional practices [ ] Poverty [ ] Child labour [ ]
   Proximity to schools [ ] Lack of food [ ]
   Others Specify .................................................................

16. What are the major causes of dropout in your school?
   Lack of food [ ] Poverty [ ] Lack of interest in education [ ]
   Indiscipline [ ] Lack of parental support [ ]
   Others specify .................................................................

17. To what extent can the current pupils’ enrolment be attributed to availability of School Feeding Programme?
   [ ] A great extent [ ] Moderately [ ] No relationship

18. What are the possible causes of pupils not being enrolled to school?
   (Tick appropriately)
   Traditional practices [ ] Poverty [ ]
   Child labour [ ] Proximity to school [ ]
   Others specify .................................................................

19. What is your general view on the effects of SFP on the following:
   (a) Enrolment in the school
      [ ] SFP has improved enrolment
      [ ] Despite SFP enrolment is declining
      [ ] SFP has not had any effect on enrolment

   (b) Dropout
      [ ] SFP has minimized dropout
      [ ] SFP has not had any effects on dropout
      [ ] Despite SFP dropouts have increased
Section D: School Feeding and Academic Performance

20. Has the School Feeding Programme affected the academic performance of pupils in your school? Yes [ ] No [ ]
If yes, has the effect been positive or negative?
Positive [ ] Negative [ ]

21. Indicate in the table below the performance trend of the school, for the last six years.

<table>
<thead>
<tr>
<th>Year</th>
<th>MSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td></td>
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<tr>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
</tr>
</tbody>
</table>

22. To what extent do you associate this performance to the School Feeding Programme?
[ ] To a great extent [ ] To some extent [ ] No relationship

Section E: Challenges

23. What challenges does your school experience in the implementation of School Feeding Programme?
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

24. What strategies can be put in place to improve the School Feeding Programme?
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
APPENDIX C

QUESTIONNAIRE FOR HEAD TEACHERS

The purpose of this questionnaire is to collect information on School Feeding Programme and participation to education in Isiolo Central Division. All the information will be held in confidence.

Section A: Background Information

1. Number of pupils currently enrolled
   Male .................... Female ................ Total ........................

2. Number of teachers available
   Male .................... Female ........................

3. What is the capacity of the school? ..............................

Section B: Implementation of School Feeding Programme

4. Do all pupils take the School Feeding Programme lunch?
   Yes [ ] No [ ]
   If not where do they eat lunch?
   Carry food from home [ ] [ ] Stay without lunch
   Buy from shops [ ] Others specify...........................................

5. When was theSchool Feeding Programme started in the school? .............

6. In the table below indicate whether the following aspects of SFP have improved.

<table>
<thead>
<tr>
<th>Key : I – Improved</th>
<th>NI: Not Improved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement</td>
<td>I</td>
</tr>
<tr>
<td>Amount of food served has improved</td>
<td></td>
</tr>
<tr>
<td>We have improved the quality the number of children served</td>
<td></td>
</tr>
<tr>
<td>Community participation has increased</td>
<td></td>
</tr>
<tr>
<td>We have ensured consistency in food supply</td>
<td></td>
</tr>
<tr>
<td>We have improved facilities for food preparation</td>
<td></td>
</tr>
</tbody>
</table>

7. What has been the attitude of parents, community and pupils toward School Feeding Programme?
   (d) Parents: positive .................. Negative ......................
   (e) Pupils: Positive .................. Negative ......................

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8. Are there incidences when the School Feeding Programme has been interrupted or stopped since year 2005? Yes [ ] No [ ]

9. Did such interruption affect school attendance? Yes [ ] No [ ]
   If yes, how?
   [ ] Led to absenteeism [ ] Lack of concentration by pupils
   [ ] Dropout [ ] No effects

10. (a) Are there incidences when there is a shortfall in the expected rations? Yes [ ] No [ ]
    (b) If yes, what does the school do to counter the problem?
    [ ] Ask parents to subsidize [ ] Ask teachers to contribute
    [ ] Buy from suppliers [ ] Organize fundraising drives
    [ ] Others specify ..................................................

11. What type of food is served to the pupils?
    [ ] Same type balanced diet always
    [ ] Same type imbalance diet always
    [ ] Varied types but balanced
    [ ] Varied types but unbalanced

12. How is the local community and parents involved in the implementation of school feeding programme?
    [ ] Volunteer labour
    [ ] Provision of food items (e.g. maize, beans, flour)
    [ ] Provision of fuel (firewood, kerosene)
    [ ] Membership in SFP Committee
    [ ] Financial contribution
    Others (specify)..................................................

13. Is the amount of food provided to the school adequate? Yes [ ] No [ ]

14. What are the main sources of food for School Feeding Programme?
    Government [ ] Community/parents [ ] School farm [ ]
    Donors (church, NGOs) [ ]

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Section C: School Feeding Programme and Participation and Retention

15. Are there some pupils who miss school when food rations are exhausted?
   Yes [ ]  No [ ]

16. Are there school-age children in the neighborhood who do not attend school?
   Yes [ ]  No [ ]
   If yes what are the reasons?
   Traditional practices [ ]  Poverty [ ]  Child labour [ ]
   Proximity to schools [ ]  Lack of food [ ]
   Others Specify ..........................................................

17. Indicate the enrolment trends for the last six years

<table>
<thead>
<tr>
<th>Years</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2006</td>
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<tr>
<td>2010</td>
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</tbody>
</table>

18. What is the current total school enrollment by gender?

<table>
<thead>
<tr>
<th>Class</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td></td>
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<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
19. Indicate the number of dropouts from the school for the last six years

<table>
<thead>
<tr>
<th>Years</th>
<th>Number of Dropouts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
</tr>
<tr>
<td>2005</td>
<td></td>
</tr>
<tr>
<td>2006</td>
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<tr>
<td>2009</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>

20. What are the major causes of dropout in your school?

- Lack of food [ ]
- Poverty [ ]
- Lack of interest in education [ ]
- Indiscipline [ ]
- Lack of parental support [ ]

Others specify ..........................................................

If yes what are main reasons for fluctuation?

..................................................................................................

..................................................................................................

21. To what extent can the current pupils’ enrolment be attributed to availability of School Feeding Programme?

- [ ] A great extent
- [ ] Moderately
- [ ] No relationship

22. What are the possible causes of pupils not being enrolled to school?

(Tick appropriately)

- Traditional practices [ ]
- Poverty [ ]
- Child labour [ ]
- Proximity to school [ ]

Others specify ..........................................................

23. What is your general view on the effects of SFP on the following:

(a) Enrolment in the school

- [ ] SFP has improved enrolment
- [ ] Despite SFP enrolment is declining
- [ ] SFP has not had any effect on enrolment
(b) Dropout
[ ] SFP has minimized dropout
[ ] SFP has not had any effects on dropout
[ ] Despite SFP dropouts have increased

Section D: School Feeding and Academic Performance

24. Has the School Feeding Programme affected the academic performance of pupils in your school? Yes [ ] No [ ]
If yes, has the effect been positive or negative?
Positive [ ] Negative [ ]

25 Indicate the performance trend of the school, for the last six years.

<table>
<thead>
<tr>
<th>Year</th>
<th>MSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
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<td>2008</td>
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</tr>
<tr>
<td>2009</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
</tr>
</tbody>
</table>

26. To what extent do you associate this performance to the School Feeding Programme?
[ ] To a great extent [ ] To some extent [ ] No relationship

Section E: Challenges

27. What challenges do you experience as a head in the implementation of School Feeding Programme?

.................................................................

.................................................................

.................................................................

28. What strategies can be put in place to improve the School Feeding Programme?

.................................................................

.................................................................

.................................................................
APPENDIX D

INTERVIEW SCHEDULE FOR SFP OFFICER

1. Name of Division ....................... No. of schools .................
   No. of pupils ...................... Male ....................... Female ....................

2. For how long have you served as School Feeding Programme officer in this division?

3. Explain briefly how the School Feeding Programme started in this division and how it has developed over years?

4. How has been the trend in enrolment in the division in public primary schools between 2005 to 2010? (Give actual Data and relate it to SFP)

5. Has the dropout rate in the division been increasing or decreasing for the last six years?

6. Do you think the SFP has improved retention? Explain your answer.

7. To what extent can the current divisional enrolment be attributed to School Feeding Programme?

8. What challenges do you experience as School Feeding Programme officer in the course of implementing School Feeding Programme in the Central Division?

9. What measures have you put in place to counter these challenges?

10. Has the School Feeding Programme impacted access of children to schools in Isiolo Central Division?

11. Do all schools receive adequate food package required at a particular time?

12. What recommendations would you make to improve the School Feeding Programme in Isiolo Central Division?

13. How has the school feeding programme affected academic performance of pupils in the division?
APPENDIX E
LETTER OF INTRODUCTION

Wamaru E. M.
Kenyatta University
P.O Box 384
KANGEMA

Dear Sir/Madam

RE: INVOLVEMENT OF YOUR SCHOOL IN RESEARCH
I am a post graduate student at Kenyatta University. I am undertaking a research study in
the field of education (Curriculum Studies). The questionnaire attached intends to find
the impact of the School Feeding Programme on Participation of Children to Schools in
Isiolo Central Division. I would be grateful if you would assist me to have the
questionnaire filled. All data collected will be treated with utmost confidentiality. Your
co-operation will be highly appreciated.

Yours faithfully,

E. M Wamaru.
APPENDIX F

APPLICATION FOR RESEARCH PERMIT

E M Wamaru
P.O Box 384
KANGEMA

The Permanent Secretary
Ministry of Education
P.O Box 30400
NAIROBI

Dear Sir,

RE: RESEARCH PERMIT FOR E M WAMARU REG. NO. E55/CE/15559/08

I am a student at the Department of Education Management, Policy and Curriculum Studies of Kenyatta University currently pursuing a Masters in Education Degree. I wish to go and collect data for the purpose of working on the project titled “Impact of the School Feeding Programme on Participation to Public Primary Schools in Isiolo Central Division, Isiolo District Kenya.”

I am kindly requesting your office to issue me with a research permit to enable me to achieve this.

Yours sincerely

E. M. Wamaru
APPENDIX G
RESEARCH PERMIT

REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegram: "SCIENCETECH", Nairobi
Telephone: 254-020-241349, 2213102
254-020-310371, 2213123.
Fax: 254-020-2213215, 318245, 318249
When replying please quote

Our Ref:

NCST/RRI/12/1/SS-011/1291/4 20th September, 2011

Eunice Muggure Wmaru
Kenyatta University
P. O. Box 43844
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “Effects of school feeding programme on participation in public primary schools in Isiolo Central Division, Kenya” I am pleased to inform you that you have been authorized to undertake research in Isiolo district for a period ending 31st October 2011.

You are advised to report to the District Commissioner & the District Education Officer, Isiolo District before embarking on the research project.

On completion of the research, you are expected to submit one hard copy and one soft copy of the research report/thesis to our office.

P/N. NYAKUNDI
FOR: SECRETARY/CEO

Copy to:

The District Commissioner
Isiolo District

The District Education Officer
Isiolo District
APPENDIX H

POPULATION DENSITY MAP-ISIOLO DISTRICT

Population Density Map - Isiolo District

Legend

- DENSITY
  - 3.4
  - 5.7
  - 9
  - 9.10
  - 11-411
  - 412-1591

Kenya Population Census of 1999 Data
Kenya National Bureau of Statistics (NSO)