

**THE IMPACT OF SCHOOL FEEDING PROGRAMME ON
PERFORMANCE OF PRE-SCHOOL CHILDREN IN KIKUYU
DISTRICT – CENTRAL PROVINCE**

By

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Declaration

This research project is my original work and has not been presented for a degree in any other university.

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Dedication

I dedicate this work to my husband, Geoffrey and my children, Dennis, David and Karen for the sacrifice they made for me to complete this project. Their love, care, concern, support, encouragement and enthusiasm inspired me to achieve this goal.

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I take this opportunity to thank God for good health and for bringing me this far.

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Many thanks go to my husband, Geoffrey, for his support throughout the period that I have been doing this research project.

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Abstract

This research study sought to determine the impact of the School Feeding Programme (SFP) on performance of pre-school children. The study also sought to discover the nature of SFP in Kikuyu District, establish its effects on attendance, enrolment and performance of pre-schoolers in the district and explore the challenges affecting the head teachers in its implementation. The target population of this study was 56 public schools in Kikuyu District from which a sample of 34 public schools which had pre-schools were selected.

A survey research design was used to carry out the study. The study used primary and secondary data. The primary data was collected using questionnaires, observation, checklists, performance tests and interview guides. Secondary data consisted of report forms of pre-schoolers. Questionnaires included structured and unstructured questions and were administered through drop-and-pick method to the head teachers. Observation checklists were used to help the researcher establish the conditions of the meals offered, as well as the facilities and equipment used to facilitate the programme. A schedule was used to interview parents and cooks. Report forms of pre-schoolers for the last three school examinations were collected to help compare the performance of those in SFP with those outside the programme.

Data collected was organised according to the population studied and Statistical Package for Social Sciences (SPSS) was used to analyse it, using descriptive statistics. The study found that school meals are a good way to channel vital nourishment to the children which in turn helps promote the children's performance. This was realised as good performance was reflected in schools with the feeding programme, compared to schools without it. The study also concluded that the programme improved the attendance and enrolment of pre-schoolers. The study recommends that all pre-schools implement a feeding programme to enhance expected performance.

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List Abbreviations and Acronyms

ECCD:	Early Children Care and Development
SFP:	School Feeding Programme
PEM:	Protein Energy Malnutrition
ECE:	Early Childhood Education
NGO:	Non-Governmental Organisation
WFP:	World Food Programme
ECDE:	Early Childhood Development and Education
MODEST:	Ministry of Education, Science and Technology
CBS:	Central Bureau of Statistics
UNESCO:	United Nation Education, Scientific and Cultural Programme
WHO:	World Health Organisation
KIE:	Kenya Institute of Education
FAO:	Food and Agricultural Organisation
UNO:	United Nations Organisation
KANU:	Kenya African National Union
ROK:	Republic Of Kenya.
MOEST:	Ministry of Education, science and Technology.
ASAL:	Arid and Semi-Arid Lands.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Providing school meals can play a critical role in ensuring that children learn well. Many poor children go to school on an empty stomach and cannot afford to carry a packed lunch. This leads to poor concentration in class. When children's needs are well catered for holistically, they perform well. Providing nutritious meals is an area of concern, as it helps improve their performance in school. Child psychologists have said that growth and development of a child depends on, among other things, nutrition of the mother before and after birth (King, 1966).

The development of education and training has been the focus of the Kenya Government since independence in 1963. Education and training have been perceived as the means through which social, economic and political developments can be achieved. This contributes greatly to economic growth through increased productivity (Republic of Kenya, 1988). All over the world, education and training are investments that open up many opportunities for the citizens to actively participate in national development. Basic education forms the base for further education and training.

According to the master plan on education and training 1997-2010, there is overwhelming research evidence that a minimum of education attainment among the majority of a country population is paramount for modern development. This minimum attainment in many developing countries is confined to pre-primary and primary school courses. This education improves economic productivity in the formal and informal sectors both in rural and urban areas. The outcome of education includes reductions in fertility and infant mortality, improvements of family health and nutrition, and increased awareness in participation in civil wars (Republic of Kenya -1998).

Health, education and nutrition should form an integral part of the early childhood education programme. Until recently, this kind of education was seen as less significant in early childhood education. Its importance, however, cannot be over emphasised. Early Childhood Education lays a foundation for creativity, integration, self-reliance and survival (Session Paper, 2005). Provision of this education has been integrative, which means that it nurtures

the personality of the child as well as developing him/ her mentally, socially and emotionally (MOEST, 1998). The provision of security, adequate nutrition and promotion of good health is recognised as constituting the foundation of proper growth of these children.

The World Food Programme (WFP) in Kenya provides assistance to 770,000 primary school children in more than 1,700 schools located in different parts of the country. It launched a school feeding programme in 1980, with the overall objective of supporting the government's goal of ensuring universal primary education and education for all by 2015. According to WFP's 2008 survey, the net enrolment of boys and girls rose from 77% in 2002 to 92% in 2007 due to free primary education and provision of school meals. While gender ratio is close to parity with schools that have feeding programmes, this suggests that school meals attract the most underprivileged children in class and also helps draw hungry children to school (Hoorweg & Niemeyer, 1980).

The school feeding initiative in Kenya started with the collaboration of the WFP and the government in 1980. According to Kenya African National Union Manifesto (1969), the late president, Mzee Jomo Kenyatta, noticed that the school feeding programme in some areas would be expanded to cover other parts of the country, for KANU believed that only healthy children could utilise the opportunities provided by schools to develop their full intellectual potential.

According to the SFP handbook – United Nation Education, Scientific and Cultural Programme (1999) – the objectives of the programme are to: Improve children's capacity to concentrate and assimilate information by relieving short-term hunger, concentrate to reducing disparities in enrollment, attendance rates among different regions and contribute to increasing enrolment of children, improving attendance rates and reducing afternoon absenteeism.

The role of food is, therefore, instrumental in providing school children with nutritional supplements, increasing access and establishing attendance in the targeted areas (UNESCO 1999). Pre-school children in Kenya are severely or mildly malnourished (CBS 1979). In one of their researches, (CBS 1992), found that at least a third of Kenyans who are under five years suffer from either mild or severe malnutrition.

Malnutrition is considered a risk factor in the educational future of children and should be a major concern for health, nutrition and educational policies (Pollit 1998). Infant mortality rate in Kenya in 1996 was 76%, where some children died directly as a result of malnutrition. These surveys found out that in up to six months of age, Kenyan children grow well. Thereafter, apparently, growth starts to slow down. This paints a gloomy picture, especially toward the future of Early Childhood Care and Development (ECCD), as it is known that this growth is prevalent within the pre-school system in the country hence has serious development implications.

A family is a socialising agent which provides the child with the necessary support and basic needs that form the foundation of a child's life. Pre-schools have tried to address all effects of malnutrition by ensuring that children are assisted and guided to eat a proper diet in order to have holistic development. Despite this, the quality of food has been questioned. Lack of commitment and little concern towards school programmes by several agencies has been a major drawback to ECCD.

Table 3.1: A Balanced Diet Meal

Food Group	Nutrients and Example of Foods
Energy Giving Foods	Foods that provide carbohydrates like rice, Bread and potatoes.
Body Building Foods	Foods that provide proteins like meat, beans and milk.
Protective Foods	Foods that provide vitamins and minerals like cabbage, spinach and fruits.

Every meal that is provided to a child should contain a balanced diet. Food from each of the three groups should be included in the meal in order to come up with a well balanced diet. Failure to address the pre-school children requirements like school feeding programme has led to failure of quality feeding programmes in the centers. From the foregoing background the study will survey the impact of School Feeding Programme (SFP) on Early Childhood Development and Education (ECDE).

1.2 Statement of the Problem

A feeding programme is a scheduled activity that provides enough nutrition and a balanced diet. Retention and performance are serious issues of focus for the Government of Kenya. Food has been acknowledged as life and a power in activating people's life as well as supporting various areas of child development, which is dependent upon correct amount and quality (Oniago, 1990). This fact has not been fully embraced within pre-schools in Kikuyu District.

Most public pre-schools in Kikuyu District enroll children from disadvantaged households. These children suffer from hunger and malnutrition, due to their poor socio-economic backgrounds. Studies in other areas showed that hungry children tire easily and this handicaps their mental, physical, emotional growth and development (Oniago, 1990).

Mungai (2004) in his research findings on the role of SFP on education development found that it is a valuable instrument for stimulating enrolment and establishing attendance as well. It also helps to enhance learning performance because of the regular attendance. No study has been done in Kikuyu District to establish the impact of school feeding on pre-schoolers' performance.

The pre-schools are not funded by the government for most of their requirements. It has, therefore, been left up to the parents to pay for any expenses required by their children while in school. Due to their poor socio-economic status, they are only able to pay a small amount of money to cater for the meals offered in school. This leads to intake of unbalanced meals by their children. For schools to have an effective SFP, there are areas of concern that ought to be addressed well.

1.3 Purpose of the Study

The purpose of this study was to establish the impact of SFP on the general performance of pre-schoolers in Kikuyu District.

1.4 Objectives of the study

The objectives of the study were:

1. To discover the nature of SFP in Kikuyu District.
2. To establish the effects of SFP on attendance and enrolment of pre-schoolers in the district.
3. To determine the effects of SFP on the performance of pre-schoolers.
4. To explore the challenges affecting head teachers in the implementation of SFP.

1.5 Research Questions

1. What is the nature of SFP in Kikuyu District?
2. What are the effects of SFP on attendance and enrolment of pre-schoolers in the district?
3. What are the effects of SFP on the performance of pre-schoolers?
4. What are the challenges affecting head teachers in the implementation of SFP?

1.6 Significance of the Study

Feeding programmes should be seen as a chance to find an alternative, affordable, appropriate approach that will make feeding school children possible, to enhance performance and promote consistent learning in pre-schools. It should also improve a child's growth and development. Since poor growth during early childhood is very common in some areas Kenya, it is important that the problem be identified in its initial stage, so that appropriate measures are taken.

The findings of the study may be used to provide information to the feeding programme managers or sponsors on effective implementation and management of SFP. They may also assist the teachers and others involved in the feeding programme to identify the type of food that would be beneficial to pre-schoolers' health and the eventual impact on performance.

The study will guide parents, teachers and the community on ways of starting and maintaining feeding programmes at pre-school, which will motivate children to succeed in school. It will also provide general knowledge on the impact of SFP on the performance of pre-school children and enhance performance and consistent learning in pre-schools, as children's health will be addressed.

The findings may also help the Ministry of Education to improve ways of learning and managing pre-schools in Kenya.

1.7 Limitations of the Study

In the pursuit of this study, several limitations were experienced. The first was the cost in terms of time, effort and finances to carry out an extensive and exhaustive research. The second was to obtain accurate information because of fear of appraising/victimisation on the part of the respondents. Lastly, the study was qualitative in nature, therefore, it relied on respondents' perceptions and views, and the quality of data depended on them.

1.8 Delimitations of the Study

The study focused on the impact of SFP on the performance of pre-schoolers in Kikuyu District. The study was carried out in pre-schools attached to public schools in the district, which is in Central Province of Kenya. The respondents included head teachers, pre-school teachers, parents and children of pre-schools.

1.9 Basic Assumption of the Study

The study assumed that the target group would be willing to volunteer information and respond honestly to the questions. The questionnaires would be filled in and returned promptly. There were qualified human resources and sufficient facilities to effect SFP and the programme was on-going. There was proper instructional supervision in pre-schools

1.1.0 Definition of Key Terms

School Feeding Programme: This is a scheduled activity of providing enough nutritious and balanced diet to children at school.

Performance: Ability to do well in attainment of skill, knowledge and attitude.

Enrolment: Refers to the number of children registered in a school.

Nutrients: Components of food that are needed by the body in adequate amount in order to grow reproduce and lead a normal life.

Malnutrition: A degradable kind of nutrition leading to ill health. It is lack of nutritious food.

Management: This involves planning, organising, directing and controlling of activities within an institution set up.

Pre-schoolers: Children who are at the age of zero to six years learning at pre-schools, nurseries, kindergarten or child care centers.

Menu: A list of food that is served to fit the needs of an individual.

1.1.1 Organisation of the Study

This research study was motivated at determining the impact of SFP on the performance of pre-schoolers in Kikuyu District. This research project was organised into five major sections (Chapter One to Five).

Chapter One consists of the introduction, which is mainly the background of the study, statement of the problem, purpose of the study, objectives of the study, significance of the study, limitations and delimitations of the study, assumptions of the study and definition of terms.

Chapter Two outlines the literature of previous studies by other researchers. It begins with an overview of SFPs. This chapter also outlines the effects of the programme on performance, empirical framework, theoretical framework and conceptual framework.

Chapter Three consists of the research methodology. In the research methodology, the researcher indicates the research design, target population, sample size and sampling procedure, research instruments, validity and reliability, data collection procedures and data analysis.

Chapter Four discusses data findings, analysis, interpretation and presentation. The topic of research was to investigate the impact of SFPs on performance of pre-schoolers in Kikuyu District. Descriptive research design was used in order to help achieve the research objectives where the target population for this study comprised of head teachers of public pre-schools, parents, teachers, cooks and pre-schoolers in Kikuyu District.

Chapter Five gives the summary of the findings according to the research objectives, which helped the researcher to draw conclusions and recommendations.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In this chapter emphasis was on the impact of school feeding programme on the performance of the pre-school children. This section dealt with an overview of SFP with proper nutrition and reviewed related factors such as higher enrolment, attendance rate, good health, increased participation, attention in class and prevention of hunger, using literature to support them.

2.1.1 An overview of School Feeding Programme with Proper Nutrients

A feeding programme is a scheduled activity of providing enough nutrition and balanced diet to a selected group of people. It is a laid down schedule for a school to give food to children to enhance learning and other activities. In order to encourage good performance a good feeding programme should be there to encourage enrolment and attendance and discourage dropout, provide the child with the right food for health and strength, sustain learning process in children through encouraging participation and concentration, and prevent children from feeling hungry while at school. Hungry children cannot pay attention in class (Mitchell *et al.*, 1999).

Levinger (1989) says that SFPs make a difference in enrolment and attendance of children to school. The programme also helps poor families by giving their children a good meal each day and thus saving family food. SFPs cannot be expected to make a direct measurable contribution to combating malnutrition among school children. The focus is on school feedings role in maximising children's learning capacity through the relief of short-term hunger, and thus improving performance.

The national school feeding programme was founded in 1967 guided by the philosophy 'A hungry child cannot learn. It was mainly using locally produced foods from the national cereals and produce board. However, this programme alone could not meet the demands for feeding programs in the country. Thus, the government encouraged development partners to join in and assist in this venture. The WFP is among the various development partners who have been very supportive in this area (Republic of Kenya and UNICEF, 1994). In 1981,

WFP and the Government of Kenya started a school feeding programme, which was a joint venture. Its long term objective was to help Kenya achieve universal primary education (UPE) in the ASAL regions. Food assistance through this programme is channeled to both the pre-schools and primary schools. The immediate objectives of this programme were to maintain regular attendance rates in the schools, increase attention span of learners through provision of school meal, increase enrollment in pre-schools and primary schools.

According to a WFP 2008 survey, the net enrolment rate for boys and girls raised from 77% in 2002 to 97% in 2007 in Kenya, due in part to free primary education and in part the provision of school meals. While gender ratio is close to parity with schools with feeding programme, this suggests that school meals attract the most underprivileged female students in class and also draw hungry children to school each day.

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

2.1.2 Higher Enrolment and Attendance Rate

In 2000 the WFP fed over 12 million children in schools in 54 countries working with national governments, local authorities and NGO's. WFP uses food to attract children to schools where enrolment ratios are lowest. The SFP is one of the most important ways of using food aid for education. In 1993, the pre-primary and primary feeding project accounted for more than half of all WFP development commitments totaling to \$132m out of \$253m (WFP, 2001).

In a review evaluation of US bilateral food aid programme spanning 1980-1985, the United States Bureau of Food, Peace, and Voluntary Assistance came to the conclusion that SFP programme improved enrolment and attendance.

Levinger (1986) in her literature review on SFP concluded that it probably makes a difference in enrolment and attendance if they take into account the enrolment in which they operate and also said that SFP to be introduced in poor, unstable rural areas, where enrolment and attendance are relatively low.

2.1.3 School Feeding Programmes

Among the poor, there is often not enough food at home, and most schools in developing countries lack canteens or cafeterias. School meals are a good way to channel vital nourishment to poor children. Having a full stomach also helps them to concentrate better on their lessons.

In countries where school attendance is low, the promise of at least one nutritious meal each day boosts enrolment and promotes regular attendance. Parents are motivated to send their children to school instead of keeping them at home to work or care for siblings.

In the poorest parts of the world, school meal programmes can double primary school enrolment in one year. Among the key beneficiaries are girls, who otherwise may never be given the opportunity to learn.

Food programmes work towards achieving several Millennium Development Goals (MDGs). The programmes directly address the goals of reducing hunger by half and achieving universal primary education by 2015, and of achieving gender parity in education by 2005 (Sessional Paper, 2005).

School meals contribute in, the long term to combating poverty, but it also helps to reduce disease. It provides a platform for directly addressing child health and nutrition, for example through deworming schemes. It can also be a platform for other health interventions. WFP school meals can take the form of a mid-morning snack or a nutritious breakfast of porridge. WFP uses fortified food to ensure that children get the micronutrients they need. Studies show that diet and nutrition play a critical role in physical and intellectual development, however, something more is needed to attract the poorest girls to school. In its "take-home

rations" projects, WFP provides basic food items, often including a sack of rice and a can of cooking oil, to families who send their daughters to school.

2.2 Children's Performance and Nutrition

Children are the future of any society. For this reason, they should be the starting point of any strategy that emphasises human development. The education of young children in Kenya has become of primary importance to educators, parents and the society as a whole. The problem of child malnutrition continues to plague societies and ends up affecting the education of the child. Researchers have shown that malnutrition in Kenya among pre-school children is on the increase 30% of pre-schoolers are severely or mildly malnourished (Central Bureau of Standards, 1979)

Research has, therefore, greatly emphasised the first years of life and the necessity for meeting adequately the physical, emotional, social and mental development of every child. It is therefore the task of all those who are working with children, whether parents, teachers or members of any community to provide healthcare, nutrition and education during the important and formative years of early childhood (Myers, 1992). This sentiment is in accordance with the United Nation's declaration of the right of the child.

Nutrition must be recognised as a vital component of a quality early childhood education programme aimed at good performance. The pre-schoolers' nutrition and health are some of the factors that determine in part the child's schooling and performance. Pollit (1984) says that malnutrition has become the highest risk factor for the educational future of children. It has serious developmental implications in young children because their ages are critical in growth and development. Therefore, education on nutrition should form an integral part of early childhood education programme.

Looking at school attendance and enrolment in comparable to schools with or without SFP or observing changes in pupil's number and daily attendance after introduction of SFP, a SFP evaluation study was carried in 1991 by Jarousse and Mugat to assess the relative importance of different factors in the learning of pre-schools pupil, in Benin. The study showed that SFP had positive results because children looked healthy and performed better than those who were not provided with a feeding programme.

Learning achievement was measured by comparing tests scores in French and Mathematics at the beginning and the end of the school year. The study found that children in schools with a feeding programme performed better than those in schools without. When looking for possible explanation for such a positive relationship between learning achievement and the existence of a SFP, the research identified two possibilities that there was improved nutrition of children because of SFP and attendance was good in those schools. Attending school regularly improves pre-school children cognitive development, which improves learning and performance (Jarousse and Mugot, 1991).

2.3 Effects of School Feeding Programs on Performance

SFPs are one of several interventions that can address some of the nutrition and health problems of school-age children. SFPs, and other school-based nutrition and health programs, can also motivate parents to enroll their children in school and to see that they attend regularly.

2.3.1 Cognition Improvement and Alleviation of Hunger

The number of hungry school-age children is unknown, but is likely to be a significant problem in various circumstances. Many factors contribute to hunger in school children; the long distances children have to travel to school, cultural meal practices that include no or small breakfasts or a lack of family time or resources to provide adequate meals to children before and/or during the school day. Simply alleviating this hunger in schoolchildren helps them to perform better in school.

In Jamaica, providing breakfast to primary school students significantly increased attendance and arithmetic scores. A US study showed the benefits of providing breakfast to disadvantaged primary school students. Before the start of a school breakfast programme, eligible (low-income) children scored significantly lower on achievement testes than those not eligible. Once in the programme, however, the test scores of the children participating in the programme improved more than the scores of non-participants. The attendance of participating children also improved (Meyers, 1989). In Peru, 23 malnourished and 29 well-nourished nine to 11-year-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. Breakfast was a nutritionally fortified beverage and a baked grain product fortified with iron, similar to the meal provided in the government-sponsored school breakfast programme. A series of cognitive tests were administered in an experimental setting. Speed in performing a short-term memory test and discrimination of geometric patterns were improved under the breakfast condition in both groups. The effect was more pronounced in the nutritionally disadvantaged children (Pollitt, Jacoby and Cueto, 1994).

2.3.2 Improvement of Attendance and Enrolment

Children in poor health start school later in life or not at all. A study in Nepal found that the probability of attending school was 5% for stunted children versus 27% for children of normal nutritional status (Moock and Leslie, 1986). In Ghana, malnourished children entered school at a later age and completed fewer years of school than better nourished children (Glewwe and Jacoby, 1994). The number of days that a child attends school is related to cognition and performance. SFPs can have a positive effect on rates of enrollment and attendance.

A recent evaluation of an on-going school feeding program in Burkina Faso found that school canteens were associated with increased school enrolment, regular attendance, consistently lower repeater rates, lower dropout rates in disadvantaged provinces, and higher success rates on national exams, especially among girls (Moore, 1994).

A small pilot school feeding programme in Malawi was evaluated for its effect on enrolment and attendance. Over a three month period there was a 5% increase in enrollment and up to 36% improvement in attendance/absenteeism compared to control schools over the same period (WFP, 1996).

Niger has one of the five lowest school enrollment rates in the world; the school feeding programme is intended to enhance attendance of nomad and transhumant families, particularly of girls. Beneficiaries receive the equivalent of the total daily recommended food intake (2,079kcal) in three meals per day. In addition, as an incentive for girls' participation in schools, some families receive an additional take-home ration. Evidence from past experience with the SFP shows that it contributes to its objectives: Whenever canteens have

been closed, even provisionally, immediate and high absenteeism follows and children are withdrawn from school. In areas with nomadic and transhumant populations, the school year cannot commence until food stocks arrive (WFP, 1995 p43; 1996 p13).

Although not a school feeding programme in the traditional sense, school-based food distribution has also been used successfully to improve enrollment and attendance among school-age children, particularly girls.

In Bangladesh, a programme of school-based food distribution increased enrollment by 20% versus a 2% decline in non-participating schools (Ahmed and Billah, 1994 p34).

In Pakistan, a programme provides an income transfer in the form of one or two tins of oil to families whose girls attend school for 20 days per month. In its pilot phase, the oil incentive programme demonstrated that it could make a significant contribution to full attendance.

In participating schools enrollment improved by 76% compared to 14% in the province overall.

Attendance increased from 73% to 95% among participants. The programme also claims to put additional food into the hands of mothers and to serve as a contact between mothers and teachers on distribution days (WFP, 1995 p41; 1996 p14).

These food transfer mechanisms do not offer the same potential benefits, for example, meeting short-term hunger and specific nutritional needs, as programmes that deliver food directly to beneficiaries. These kinds of programmes should, therefore, be assessed within the context of other food and resource transfer programmes. A detailed discussion of the range of options from food stamps, coupons and vouchers to a cash transfer for food can be found in the design.

2.3.3 Micronutrient Deficiency and Learning Improvement

Deficiencies of iron and iodine are among the most harmful types of malnutrition with regard to cognition. Iron deficiency renders children listless, inattentive and uninterested in learning. The research literature suggests a causal link between iron deficiency anemia and less than optimal behavior for learning (Nokes, van den Bosch and Bundy, 1998). Poor performance on a wide range of achievement tests among iron deficient children in school has been

consistently documented. Remediation of iron deficiency through supplementation has eliminated the differences in school performance and Intelligence Quotient (IQ) scores between school children previously deficient in iron and those without iron deficiencies. In the case of iodine, most studies have focused on the differences in cognitive test performance between children who lived in communities with and without endemic goiter.

The results show differences in favour of the non-goiter areas. In Sicily, for example, the proportion of children with below-normal cognitive scores was 3% in areas with sufficient iodine, 18.5% in areas where iodine was inadequate, and 19.3% where iodine was inadequate and cretinism was endemic. Studies in Indonesia and Spain have documented similar effects on children in areas with insufficient iodine (Bleichrodt et al, 1987). Fortification of school rations is the most efficient and effective route to alleviating micronutrient deficiencies in schoolchildren where SFPs are in operation.

In South Africa, soup fortified with iron and vitamin C was provided to 350 schools in an area of low socio-economic development on the Cape Peninsula. Results showed that initially 12% of six to seven year old and 20% of eight to 12-year-old children had low weight-for-age, and 49% and 31% had low serum ferritin (a measure of iron deficiency) respectively. At follow-up, after 15 weeks of intervention, iron status improved significantly; falling from 49% to 28% in six to seven-year-old children and 31% to 21% in eight to 12-year-old children (Kruger and Badenhorst, 1994 p54). A relatively new breakfast programme in Peru, which includes an iron-fortified ration, was evaluated for its short-term impact on diet, amongst other factors. The programme significantly increased dietary intakes of energy by 25%, protein by 28% and iron by 46% (Jacoby and Pollitt, 1994).

A case-control study of the impact of providing heme-fortified cookies to school children in Chile found higher concentrations of haemoglobin among children receiving the fortified cookies through the school lunch programme. The impact was most significant among children with greater demands for iron such as post-menarchial girls and pubertal boys (Walter and Hertrampf et al, 1993 p7).

2.3.4 Promotion of Community Participation

Schools that depend on the community to organise and implement SFPs offer certain advantages. These advantages include increasing the contact, and hence communication, between parents and teachers, officials and others; giving parents the opportunity to become more aware of what goes on at schools; and serving to raise the value of education/the school for parents and the whole community. For example, school canteens are viewed as an important feature of education policy in Morocco. Since 1978, WFP and the government have supported school feeding. The programmes have strong government and community support and are viewed as part of a necessary package of inputs for improving education. The feeding programme is credited with helping to maintain high enrollment and attendance and encouraging community participation in education. School cooperatives support the school canteens and parents associations assist with the transportation of food aid (WFP, 1993).

2.3 Good Health

Research has shown that two most important contributions to cognitive development and physical development differences are heredity and nutrition (Myers 1988). A child has a continuous individualised process of change in complex levels of cognitive, emotional, socialisation, body movement and speech among others, if the diet of the child is of nutritious values. He argues that a healthy child makes gain in language, cognitive and motor development compared to a child who is malnourished and retarded in growth. This helps the child in better performance.

Pollit (1984) says that malnutrition has become the highest risk-factor for the educational future of children. It has serious developmental implication on young children because their ages are critical in growth and development. Eshiwani (1990) states that nutrition education may be the single most effective way to enhance economic productivity and to promote the well being of a family. Therefore, the actual effectiveness of nutrition education in promoting the well being of a family needs further determination. The Kenyan government should dedicate its efforts towards improving the well being of its people by enhancing education and eradicating poverty and disease.

King (1966) argues that the most serious long term effects of sickness or malnutrition are of course those permanently affecting the intellectual functions and the learning capacity. This does not exclude the day to day effects of hunger. It is an everyday observation that children who are on a poor diet show little activity and lack energy. The children in pre-school are losing part of the most important period of education. Hough (1987), in his book *Education and the National Economy* says lack of food, good health and hygiene have a major effect on life and thus performance in education. Many children do not get enough of the right food to eat. They do not grow well, they become ill, many die and they do not grow up as clever, as healthy or as tall as they should be.

A well nourished child is able to attain better grades, learn all day and has some energy left to make most of other evening activities like coping with pressure, stress, resist infection have alert and active mind. These are positive ingredients of good performance and even beauty goes hand in hand with key players of correct nutrition as the skin and hair reflects your diet. In order to cater for the health and nutritional needs of pre-schoolers, pre-school institutions are advised to introduce lunches, feeding programmes and milk services. Pre-school teachers should encourage parents to organise mid morning refreshments and lunch for children who stay at school the whole day. They should be taught about nutrition, food groups, nutritional deficiencies, food production, planning and preparing family meals, food hygiene, and diet for expectant mothers, babies and pre-school children.

Students have shown that hunger has adverse effects on cognition problem solving and concentration as they contend that hungry children are found to be less alert and lethargic (UNESCO 1990). Kings (1966) argued that more effective methods be sought and it should be noted that children need nutritious foods to support growth, play and learning thus creating interests in schools. He believed that only healthy children could utilise fully the opportunities provided by schools to develop to the full their intellectual potentiality.

2.4 Participation and Concentration

A research conducted by Pollit (1984), revealed that there is a three-way relationship between health, nutrition and psychological development of a child, which influences food intake and absorption. For example, a child who is not happy may not eat well and even

when he/she eats may not benefit fully from the food eaten. In addition, a child who is sick or hungry is less active and does not interact well with the environment around him or her (Werner 1982). Mitchell (1983) argues that eating is a crucial part of every person's life. We need food for energy to do all the activities and all our body complex bio-chemical processes. This fuel comes in different forms like in proteins, vitamins, water carbohydrates and mineral salts.

It is well known as Gagne (1977) argues that nutritional problems and sickness interfere with learning because they reduce the degree of concentration. This has been succinctly expressed as generally poor health, recurrent illness, inadequate diet and unsatisfactory home which all contribute to rendering the child insufficiently alert and receptive in the class room. School feeding really helps alleviate this problem and helps to increase participation, capacity and concentration in school.

Oyugi (2007) in her study stated that feeding programmes in various preschools have given the participation of children direct benefits and that parents, teachers, and stakeholders have acquired better knowledge and skills on issues related to health nutrition and care of the children. SFP is, therefore, of great concern to the well being of children as it plays a great role in their development. Those who care for the children, for example the pre-school teachers, should, therefore, ensure that the food given to children is well balanced.

2.5 Prevention of Hunger

Pollit (1984) argues that hunger at school is common and it interferes with learning process. Many children go to school without eating breakfast and sometimes miss lunch. This leads to adverse effects of hunger for example cognition, problem solving and concentration. Hungry children are less alert and lethargic. SFPs cannot be expected to make direct measurable contribution to combating malnutrition among school children. Attention has thus been focused on school feeding role in maximising children's learning capacity through the relief of short-term hunger, where children are helped to concentrate and assimilate.

Kenya is currently facing a multitude of challenges. Recently, the government declared food shortages as a national disaster and announced that 10 million Kenyans were in need of food

assistance. As a result of drought, many families resort to extreme measures, to try ways of getting food. They are made to withdraw their children from school to look for food or income. Due to hunger these children fail to go to school and even when they go, hunger diminishes their ability to learn. When children are hungry, they are unable to concentrate in class.

School feeding is an effective platform for providing micronutrient food supplementation and other health interventions that improve children's ability to get the most out of food. The SFP has demonstrated sustained results over the years. External evaluations of the programme have found that the activity produces positive results. A study conducted by the International Food Policy Research Institute (IFPRI) in 2003 found that school feeding improved academic achievement. A nutritional survey 2007 by WFP found that children in schools with feeding programmes are five times more likely not to suffer from anaemia than those children who are in schools without it. The average haemoglobin and concentration of children from SFP is 11% higher than the average haemoglobin concentration among children from non-school feeding assisted schools. Therefore, SFPs help to prevent hunger, which will help the pre-schoolers children to participate and concentrate in class, and, therefore, improve performance.

2.6 Theoretical Framework

This study was guided by the human needs theory of Abraham Maslow (1943). According to this theory, there are certain minimum requirements that are essential to decent standards of living. These are known as physiological needs. They include food, shelter, health and clothing. They are primary needs and have to be catered for before other needs such as security and shelter, sense of belonging and affection, love, esteem and finally self actualization are pursued. Maslow proposed that mans drive towards certain direction can be arranged in a hierarchical order according to his needs as follows.

2.6.1 Maslow's Hierarchy of Human Needs

The first level of physiological needs is the needs that everyone needs on a daily basis for survival and includes basic needs like food, shelter and clothing. The second level is that of security of the self and of the physiological needs. The third level is of social need, which is a

need to belong to a certain group or association. This includes friendship, love and belonging. The fourth level is that of self-esteem, which is a sense of self-respect and self-motivation. It also includes how one may relate to other people. The last level is of self-actualisation, whereby man strives towards a viable experience and personal growth.

Maslow says that a human being goes through a hierarchy needs starting with physical needs for example food to much higher needs for example emotions. For a child to achieve this, care givers for example teachers or parents should ensure that they provide nutritious foods to the child in order to have a healthy growth. Safety and security needs are referred to as freedom from fear and anxiety and also protection from emotional harm.

Children should be provided with safety and security so as to do well in school and even at home. Failure to provide security creates discontentment. The social needs include love and belonging where children should be acceptable and provided with friendship. The self-esteem needs are the prestige needs whereby one feels he/she wants to be recognised. This makes children feel proud of themselves. The utmost need is the self-actualisation, which is the motive to become all that a person is able to be. This requires self-drive so as to achieve the goal one desires.

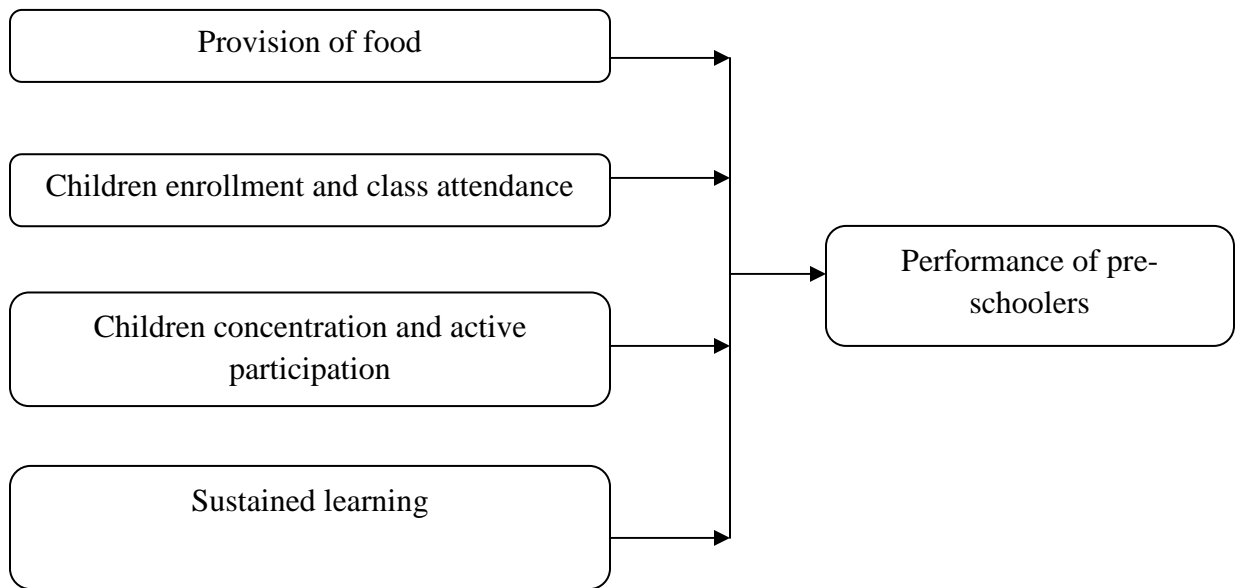
According to Maslow's hierarchy of needs, it demonstrates that when needs are met or fulfilled, pupils are generally happy and contented. The atmosphere in the school is good and learning goes on smoothly. The reverse is true in that when the needs are not met or fulfilled there is discontentment.

This model highlights the importance of food provision and security. From a broader view of development, it means that countries must also struggle to provide basic needs for use by their population. For a developing country like Kenya, it means that poverty must be prevented by making basic needs like food, clothing and shelter available to all citizens. Since man cannot survive without food, the government should make an effort to reduce food insecurity, especially amongst vulnerable groups like children. Where food aid is available for instance in schools through school feeding programmes, it will encourage good health, high motivation, participation, attention in class and will obviously reduce hunger. It should be properly monitored to ensure it assists the children (King, 1966).

2.7 Conceptual Framework

This study was motivated to investigate the impact of SFP on performance of pre-school children in Kikuyu District. In the conceptual framework the performance of pre- scholars depends on: Sustained learning process in children, student enrolment and class attendance. Children are prevented from hunger and participate and concentrate in learning.

Figure 2. 1: Conceptual Framework



Source: (Author, 2010)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section focused on research design, target population, sample and sampling procedure, research instruments, validity and reliability of the instruments data collection and data analysis procedures.

3.2 Research Design

This research was a survey study. The researcher used descriptive research design for descriptive purposes. It is a kind of design used in studies that have individual people as the units of analysis. It involves some individual persons who must serve as respondents or informants. Descriptive research design can be used when collecting information about peoples' attitudes, opinions according to feelings or any of the variety of education or social issues (Orodho and Kombo, 2002). Descriptive research is useful in describing the characteristics of a large population. This helps the researcher to ask many questions that provides considerable flexibility in the analysis.

3.3 Target Population

The target population included the head teachers of the public pre-schools, parents, teachers and cooks in Kikuyu district. There are 56 public schools in Kikuyu District and out of these only 34 were selected because they have preschools. Out of the 34 pre-schools selected, seven had SFPs, while 27 had none.

3.4 Sampling Size and Sampling Procedure

Sampling is the procedure a researcher uses to gather people, places or things to study. It is a process of selecting a number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire group, (Orodho and Kombo 2002). Simple random sampling was used to select one head teacher, 5 pre-schoolers, two cooks, two teachers and three PTA members from each school for interviews. The sample size, therefore, was 442 respondents.

Table 3. 1: Sample size

	No. in each school	No. of schools	Total
Head Teachers	1	34	34
Parents	3	34	102
Cooks	2	34	68
Teachers	2	34	68
Pre-Schoolers	5	34	170
Total	13	34	442

3.5 Research Instruments

The study used both primary data and secondary data. The primary data was collected using questionnaires, observation list, performance tests and interviews guides. Secondary data consisted of report forms of pre-schoolers.

Questionnaires included structured and unstructured questions and were administered through drop-and-pick method to the head teachers. Questionnaires formed a major data collection tool for collecting basic statistical facts on attendance, participation and performance. The structured questions were used in an effort to conserve time and money as well as to facilitate in easier analysis as they are in immediate usable form, while the unstructured questions were used so as to encourage the head teachers to give an in-depth and felt response without feeling held back in revealing of any information.

Observation checklist was formulated to include information that will lead to conducting the study. Observations were made when the researcher visited the respective pre-schools at meal times. This helped to establish the condition of meals offered, facilities and equipments that were used in the particular pre-school to facilitate the SFP. The researcher also observed children before and after meals to ascertain their performance. In order to establish the

performance of the pre-schoolers in the target schools, records of exams done previously in the school were checked.

The pre-schoolers were also given an examination to ascertain their performance.

The interview schedule was used by the researcher to interview parents and those in charge of the feeding programme in the respective schools.

Report forms containing the performance of the pre-schoolers for the last three exams were collected. These were used to compare the performance of pre-schoolers within the SFP and those outside it.

3.6 Validity

Validity according to Mugenda and Mugenda (1999) is the accuracy, meaningfulness and the degree with which results obtained from the analysis of data actually represent the phenomena of the study. In order to determine the validity of the instruments before administration of the questionnaires, the researcher presented them to the supervisor for analysis and critique. This helped the researcher to rectify and come up with good reliable instruments and also to ensure credibility of the results.

3.7 Reliability

Reliability has to show the degree at which the research instruments will yield good results. In order to achieve this, the researcher administered the instruments herself in order to assess their clarity.

3.8 Data Collection Procedures

The researcher visited the pre-schools during the learning session. Questionnaires were delivered to the respondents and a period stated on when to complete them, for example two weeks. After this period the questionnaires collected and put in a safe place for confidential purposes. The whole information given by each respondent was put together and recorded down accordingly for interpretation and analysis.

3.9 Data Analysis

The data collected was both qualitative and quantitative in nature. Qualitative data was analysed by content analysis. Content analysis is the systematic qualitative description of the composition of the objects or materials of the study (Mugenda and Mugenda, 1999). Data was coded into Statistical package for a Social Scientist (SPSS) and then analysed using statistical measures such as percentages, mean scores and standard deviations. This helped summarise and describe variables state such as frequency of meals, types of meals offered, availability of resources and nutritional status of pre-schoolers. Structure data was analysed through content analysis to understand the consistence of information from various respondents. The results were then presented using frequency tables, graphs and charts. Comparative analysis was used to compare pre-schoolers within the SFP and those outside it.

CHAPTER FOUR: DATA FINDINGS, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter consists of data findings, analysis, presentation and interpretation. The topic of research was to investigate the impact of SFP on performance of pre-schoolers in Kikuyu District. Descriptive research design was used in order to help achieve the research objectives where the target population for this study comprised of head teachers of public pre-schools, parents, teachers, cooks and pre-schoolers in the district.

Simple random sampling was used to select five pre-schoolers, two cooks, two teachers and three parents from each school for interviews. One head teacher from each school was selected. However, the response rate was found to be 78% for head teachers, 67% for parents, and 100% for teachers and cooks. This indicated that 28 head teachers, 68 parents, 68 teachers, 68 cooks of the sample population were able to successfully fill and return the questionnaires to the researcher. The reason for this was because the researcher adopted the school visiting method which was effective since most pre-schoolers, cooks and teachers liked the interviews thus the response was likely to be good. The data collected was analysed using the Statistical Package for Social Sciences (SPSS) and the output presented in form of tables, pie charts and bar graphs. The research made use of frequencies, percentages, to interpret the information. For easier analysis, the chapter is divided into two parts: Demographic information and the information on SFP from each group of respondents.

4.2 Demographic Information

In this section the researcher analyzed the gender, age, experience, number of years in the present station of head teachers, teachers, pre-schoolers parents and cooks.

4.2.1 Head teachers

The researcher was interested in knowing the gender, age, teaching experience, number of years in the present station for the head teachers, presence of ECD section and the enrollment procedure for ECD learners. The researcher found that all head teachers were female whose age was 31 years and above with majority being 41 years and above (85%). Out of all the respondents 57% had a teaching experience of 6-10 years while 43% had a teaching

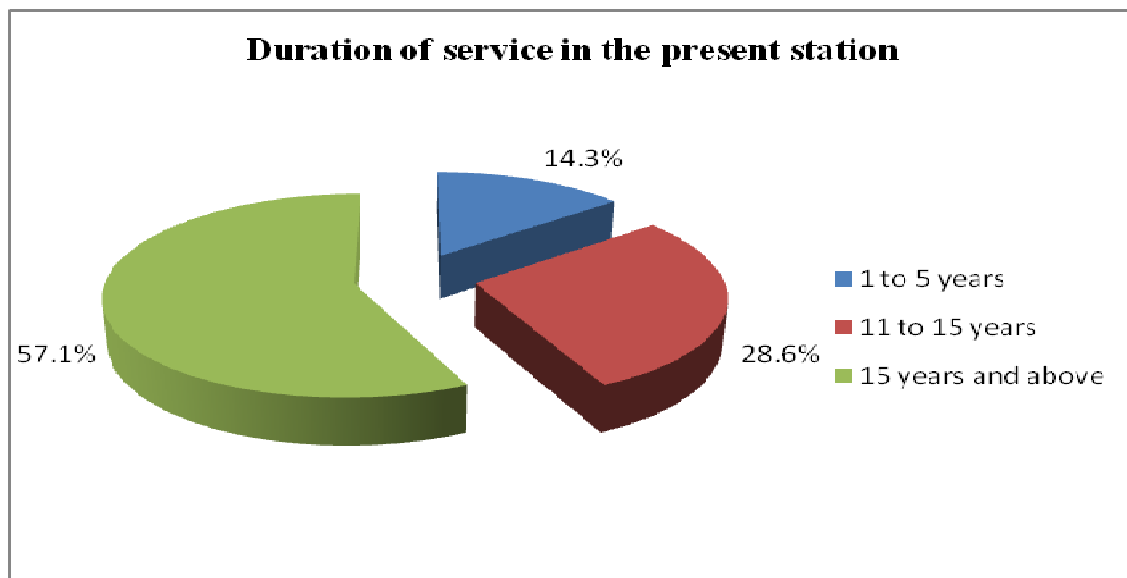
experience of 11 to 15 years. Table 4.1 below gives the duration of the head teachers at the current station.

Table 4. 1: Duration of service in the present station

		Frequency	Percent
Valid	1-5yrs	4	14.3
	11-15 yrs	8	28.6
	15 and above	16	57.1
	Total	28	100.0

From table 4.1 above majority of the head teachers had been in the present station for 15 years and above. This is given by 57.1% of all respondents. They were followed by 28.6% of the respondents who had been in present station for 11-15 years. The least (14.3%) had been in the present station for 1-5 years. Figure 4.1 also shows the respondents' duration of service in the present station.

Figure 4. 1: Duration of Service in the Present Station



In the same area, all respondent confirmed their pre-school had an ECD section which enrolled both boys and girls.

4.2.2 Teachers

The researcher was interested in knowing the gender, age, teaching experience, number of years in the present station for the teachers, number of ECD learners the teachers have in a class and whether the teachers are trained ECD Teachers. The researcher found that all teachers were female. Out of all respondent teachers, 44.4% were between 31 to 40 years, 33.3% were 40 years and above, while only 22.2% were between 23-30 years. This indicated that majority of the teachers were above 31 years of age. Table 4.2 below demonstrates the findings.

Table 4. 2: Respondents' Age

		Frequency	Percent
Valid	23-30 years	15	22.2
	31-40years	31	44.4
	40 and above	22	33.3
	Total	68	100.0

The researcher also found out that, out of all respondent teachers, 66.7% had a teaching experience of 11 to 15 years, 16.7% had an experience of six to 10 years and another 16.7% had an experience of 15 years and above. This implied that majority of the respondent teachers had a teaching experience of 11 to 15 years. It could have been as a result of their age which indicated they had been working for long. Table 4.3 below gives the same finding.

Table 4. 3: Respondents' Teaching Experience

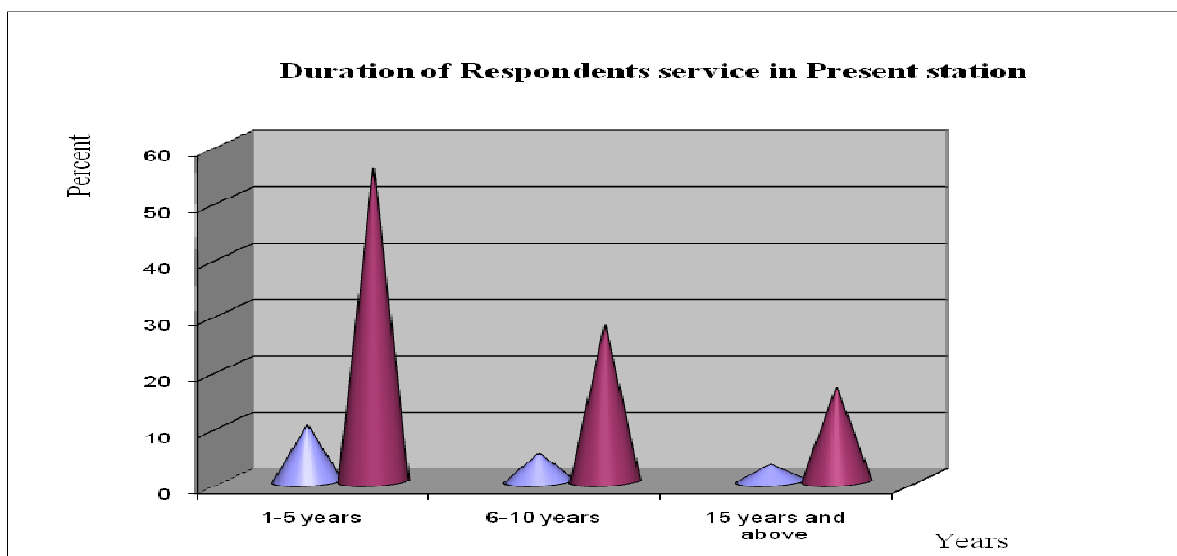
		Frequency	Percent
Valid	6-10 years	11	16.7
	11-15 years	45	66.7
	15 years and above	12	16.7
	Total	68	100.0

Further in this area the researcher noted that 55.6% of the respondent teachers had been in their present stations for a period between one to five years, 27.8% had been in service in the present station for a period between six to ten years, while only 16.7% were in their present stations for 15 years and above. Therefore, majority of the respondent teachers had been in their present stations for a period between one to five years. Table 4.4 and Figure 4.2 indicate the same findings.

Table 4. 4: Duration of Respondents Service in Present Station

		Frequency	Percent
Valid	1-5 years	38	55.6
	6-10 years	19	27.8
	15 years and above	11	16.7
	Total	68	100.0

Figure 4. 2: Duration of Respondents Service in Present Station



In another area, all teachers indicated that they had between 55 and 75 ECD learners in their pre-schools. The ratio of boys to girls was 1:1 indicating that the numbers of girls equaled the numbers of boys. This indicated there was no discrimination in ECD learning programme in this area. Also it was important to note that all ECD teachers were trained in early childhood education.

4.2.3 Pre-school Parents

The researcher sought to know the gender, marital status, number of children, whether the respondents' children go to school and if the children take their lunch in school. From the findings, 75% of all respondent parents were female while 25% were male respondents. Therefore, the majority were female. Out of all respondent parents, 55% were married, while 45% were single women parents. Thus majority of the respondents were married. The respondent parents indicated they had at least one child with the maximum number of children noted to be five children in one family. This was mostly among the married couples. Single parents had utmost two children. All their children went to school and all parents had at least a child in pre-school. From the findings, 85% of the children took their lunch in school while 15% carried their food to school. Finally, it was noted that no parent indicated that their children complained on anything about the food.

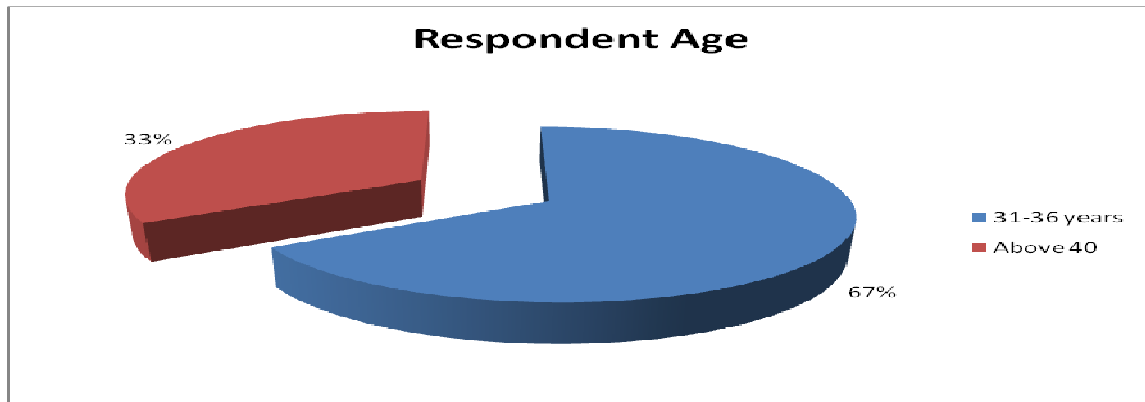
4.2.4 Cooks

The researcher sought to know the age, marital status, and religion and education background of the cooks. To begin with, the researcher noted that the 66.7% of the respondents were between 31 and 36 years, while 33.3% were above 40 years. Therefore, all respondent cooks were above 31 years. Table 4.5 and Figure 4.3 below indicate the same findings.

Table 4. 5: Respondent’s Age

		Frequency	Percent
Valid	31-36 years	45	66.7
	Above 40	23	33.3
	Total	68	100.0

Figure 4. 3: Respondent ‘s Age

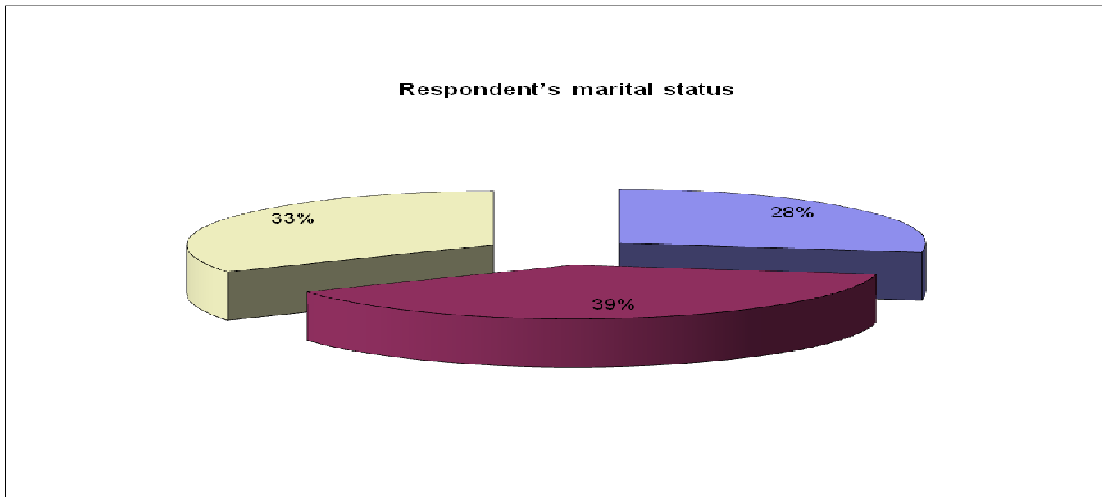


Further, the researcher noted that 38.9% were single, 33.3% were widowed, while 27.8% were married. This indicated that majority of the respondent cooks were single. Table 4.6 and Figure 4.4 below illustrate the findings.

Table 4. 6: Respondent’s marital status

		Frequency	Percent
Valid	Married	19	27.8
	Single	26	38.9
	Widowed	23	33.3
	Total	68	100.0

Figure 4. 4: Respondent’s marital status



Regarding the education background, majority of the respondent’s cooks had primary school qualification being represented by 61.1% of the respondent cooks. The other 38.9% had secondary school qualification.

Table 4. 7: Educational Background

		Frequency	Percent
Valid	Primary	42	61.1
	Secondary	26	38.9
	Total	68	100.0

4.3 Nature of School Feeding Programme

In regard to the nature of SFP, the researcher wanted to know if they existed, types of food and water offered by the school, who cooks the food and how the children are served.

4.3.1 Existence of School Feeding Programme

In this regard, the researcher found out that all the schools had a feeding programme in the beginning but in the present only 23% of the schools had a feeding programme. This implied that 77% of the respondent schools did not have a feeding programme in the present. Out of all the respondent schools, 71.4% had the programme for a period of one to five years, while only 28.6% had for a period of six to ten years. This implied that the idea of SFP was not practiced for long. Table 4.8 below illustrates the same.

Table 4. 8: Duration of School Feeding Programme

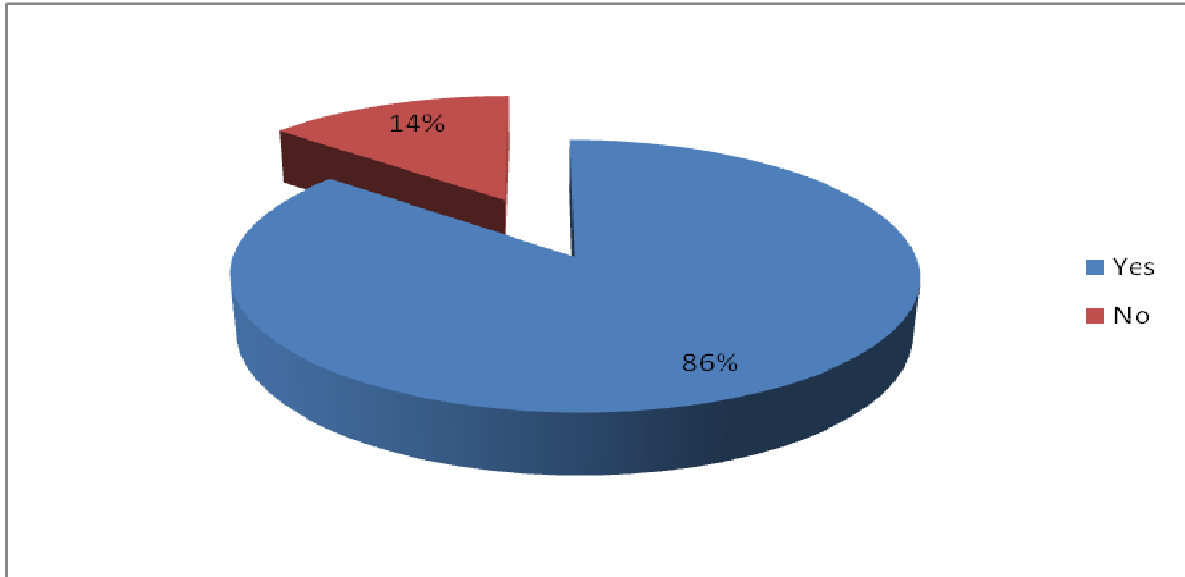
		Frequency	Percent
Valid	1-5years	19	71.4
	6-10years	8	28.6
	Total	27	100.0

All the head teachers confirmed that they had called a parents meeting to create awareness concerning the SFP, whereby each child was represented by his/her parent. Out of all the respondent schools only seven pre-schools had a feeding programme. Therefore, the researcher took this number to represent the sample of the pre-schools having a feeding programme.

4.3.2 Financing of the School Feeding Programme

Whether The Parents Paid For The School Feeding Programmes

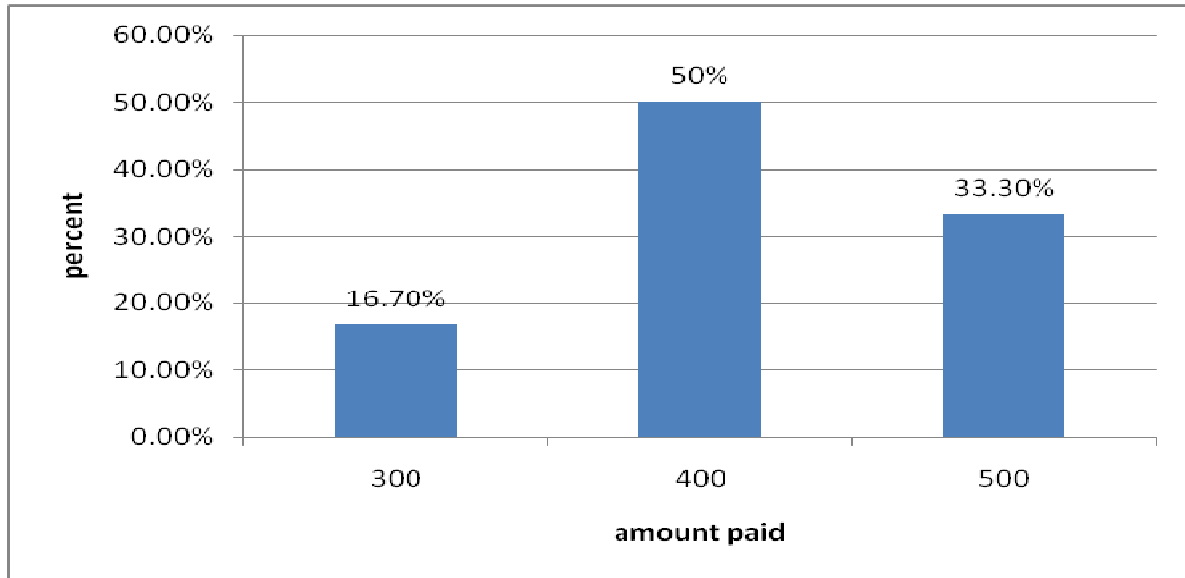
Figure 4. 5: Whether The Parents Paid For The School Feeding Programmes



From the seven pre-schools which had SFP, the researcher requested the parents to indicate whether they were paying for the programme. From the results as shown above 86% of the parents indicated that they were paying while 14% indicated that they were not paying for the school feeding programme. For the schools where the parents were not paying for the programme, the respondents indicated that a donor was paying for it.

Amount the Parents Were Paying

Figure 4. 6: Amount the Parents Were Paying



From the parents who indicated that they were paying for the programme, the researcher enquired to know how much they were paying. As indicated in figure 4.6, 50% of the respondents were paying Sh400, 33.3% were paying Sh500, while 16.7% were paying Sh300.

4.3.3 Types and Frequency of Meals

Table 4. 9: Types and Frequency of Feeding

In relation to types of food offered table 4.9 indicates that 40% of the respondent's pre-schools were offering fruits and food, while 60% were offering food alone.

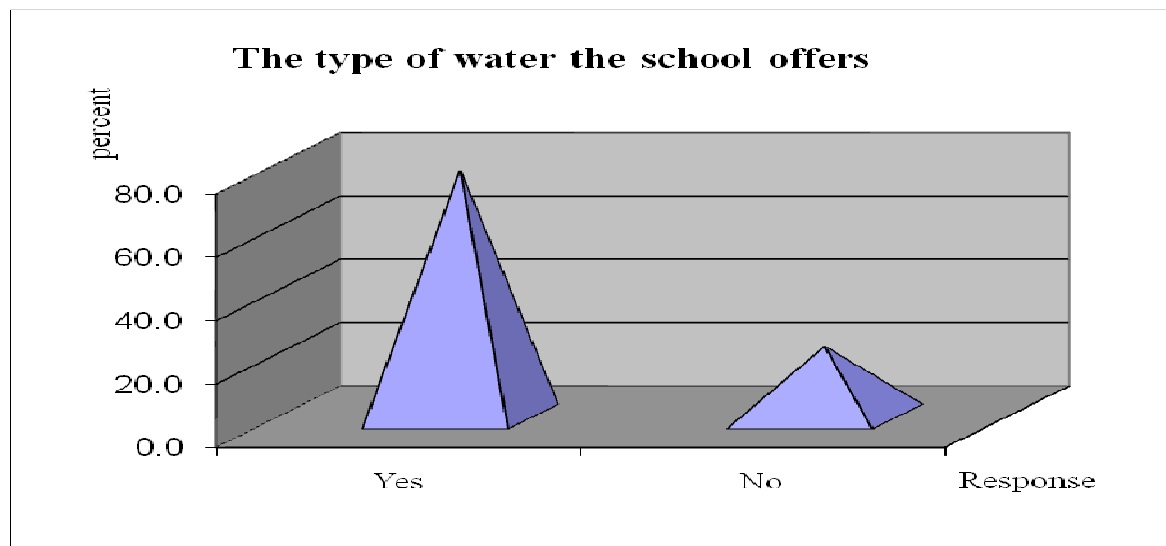
		Frequency	Percent
Valid	Fruits and food	3	40.0
	Food	4	60.0
	Total	7	100.0

In regard to water offered, Table 4.10 and Figure 4.5 indicate that 60% of the respondent schools used piped water, while only 40% of the respondent schools used boreholes. This is to indicate majority used piped water.

Table 4. 10: The Type of Water the School Offers

		Frequency	Percent
Valid	pipd water	4	60
	boreholes	3	40
	Total	7	100.0

Figure 4. 7: The Type of Water the School Offers



All the respondents indicated that the person who cooked was an employed community member and that the children were served by the cook. The cooking equipments/utensils are kept in the kitchen and all respondent schools indicated they used firewood and charcoal to cook.

Out of the 27 schools which did not have a feeding programme, two respondents indicated that there are children who do not carry food to school. They further mentioned that such children are sent home during lunch hour and their parents are advised accordingly. All the

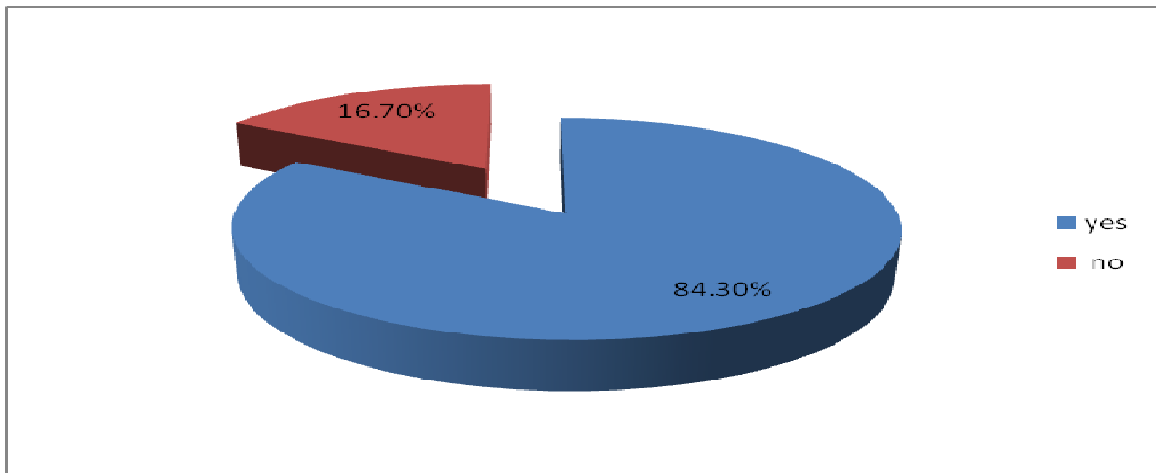
respondent schools with a collaborative programme noted that they ask parents to contribute toward a common meal.

The school menu in all schools was porridge for break and ugali/rice with meat/beans and cabbages for lunch interchangeably. Out of all the respondent schools in the feeding programme, 40% gave a banana after meal to the pre-schoolers. This was noted as the most locally available fruit.

Further the researcher noted that the teachers normally met with the head teacher and discussed how to make the feeding programme better. Their meeting was done occasionally and they discussed issues to deal with, meal times, food serving, how the meals were prepared, need for additional of facilities and to give any feedback on the programme as conveyed by the pre-schoolers. They all agreed that the meetings had an impact on the feeding programme where the issues discussed were looked into to improve the programme performance in delivering service and the quality of meals. They also conveyed the feedback to WFP.

4.3.4 Parents' Support of the School Feeding Programme

Figure 4. 8: Parents' Support of the School Feeding Programme



From the pre-schools which had a feeding programme, the researcher also wanted to know if the parents supported it. From the findings, 84.3% of the parents supported the feeding programme, while 16.7% of the respondent parents did not support it. The respondent parents indicated they supported via:

- Constructing the kitchen
- Paying the cooks
- Offering facilities like, spoons, plates, and sufurias.
- Offering materials like firewood
- They take part in kitchen cleaning activities
- Volunteering to serve the children

Through the feedback the researcher gathered that the parents encourage their pre-school children to eat at school. Also it was of importance to note that the parents discussed the nutritional value of SFP with the school management occasionally. In regard to the contributions they make towards the programme, the parents indicated they are charged once per term and that the amount is enough compared to the burden relieved from them; they only cater for dinner after school.

The children liked the food given at school because it was adequate and of good quality. This was preferred as compared with food they took at home where they had to share with their other siblings. The parents also agreed that the quality of food was good and healthy. The programme offered two meals according to the respondent parents. They also noted that they understand the school menu where their children get porridge for tea break and rice/ugali with beans/meat and cabbages for lunch. The parents noted that the SFP had benefited their children positively and gave out the following advantages of the programme:

- Offers their children a balanced diet
- Allows time for their children to read since they don't have to think about their lunch meal
- Offers a good base for concentration in studies
- Allows all children to view others equally since they eat a common meal.

The cooks indicated that they were not trained cooks, but from experience they had mastered the art of food preparation, especially for children. Majority of the cooks (66.7%) had been working in their current stations for a period of zero to five years, while the rest of the respondent cooks (33.3%) had worked for a period of five to ten years. Table 4.11 gives the same findings.

Table 4. 11: Duration of Work by the Respondent

		Frequency	Percent
Valid	0-5years	45	66.7
	5-10 years	23	33.3
	Total	68	100.0

The respondent cooks further indicated that they cooked ugali and rice interchangeably throughout the week from Monday to Friday. The food products were obtained locally, since majority of the parents were farmers. These include green vegetables, maize flour and fruits. Other products were purchased from the supermarket by the head teacher. The vegetables were purchased by one of the cooks. Firewood and charcoal was used as the main energy sources of energy in the preparation of food in the schools.

4.4 Effects of School Feeding Programme on Attendance and Enrolment of Pre-schoolers

The researcher found out the following results in regard to the number of children enrolled in the school for the named years. This is presented in Table 4.12 below.

Table 4. 12: The Number of Children Enrolled in Pre-school; 2006-2009

		2006		2007		2008		2009	
Number of children		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Valid	0-100	11	42.9	26	100.0	26	100.0	19	71.4
	201-300	15	57.1	0	0.00	0	0.00	7	28.6
	Total	26	100.0	26	100.0	26	100.0	26	100.0

From the above table the researcher concluded that the number of children enrolled in the schools was high in the year 2006 followed by the year 2009, while remaining the same in the years 2007 and 2008. This could have been as a result of the feeding programme being present in earlier years in all the respondent schools, but was not present in all schools by the year 2009. However, due to an increase in performance as the years progressed there could have been an increase in enrolment in the year 2009.

Table 4. 13: Attendance of Pre-schoolers

	Schools with a feeding programme		Schools without a feeding programme	
	2008	2009	2008	2009
	Percentage	Percentage	Percentage	Percentage
Term 1	94.2	96.4	76.7	67.5
Term2	78.4	96.5	78.4	76.3
Term 3	87.4	97.5	81.2	75.8

Table 4.14 above shows the attendance of pre-schoolers in the year 2008 and 2009 for the three terms. The results indicate that in the years 2008 and 2009 the schools which a feeding programme had a higher attendance than the schools which did not have an SFP. This shows that a feeding programme is one of the factors influencing the attendance of the pre-scholar.

4.5 Effects of School Feeding Programme on the Performance of Pre-schoolers

In the area of performance, the respondent head teachers from the schools in the feeding programme confirmed that there has been an increasing trend in performance with many pre-schoolers being attentive in class. However, one of the pre-schools performances was constant and sometimes going in a low trend but it was attributed to other factors like poor classrooms and family related issues.

On the other hand, schools out of the feeding programme had an increasing trend in performance during earlier years while in the present years the trend was in the decline. This was most likely attributed to changes in the feeding programme in the area.

All the teachers from the schools offering the feeding programme further graded their school feeding programme as good and all respondent teachers noted the effects of the feeding programme on performance as good. This indicated that the feeding programmes had a positive impact on performance. This was further supported by the fact that children's participation in activities before meals was slow and there was poor concentration as opposed to participation after meals where concentration was good and the children were jovial. The children's favorite meal was ugali.

According to the teachers, their role as far as the feeding programme is concerned is to ensure that children are taken care of adequately since this affects their class work. Also they work as intermediaries between the children and head teachers. They also indicated that they recommend which meals to be given to children and that they check on quality service delivery among the cooks.

The respondents noted that the child's performance had been on the increase mainly because the children were comfortable. Some parents (15% of the parent respondents whose children

carried food to school), noted that their children performance was inconsistent and in the decline. Some children had to sacrifice dinner to get food to carry to school.

Finally, all the respondent parents noted their children’s performance since he/she joined the pre-school had been good. Those parents whose children were not in the programme noted there were some disagreement between the management, and parents which led to the stopping of the programme. They wished it could be re-adopted since their children were really affected and it was hard for them to take them to schools with the programme. All respondent parents were of the opinion that the government should support SFP in primary schools under the free primary education. This would improve learning and performance.

Comparison of Performance in Pre-schools with School Feeding Programme with those without the Programme

Table 4. 14: Comparison of Pre-schools’ Performance

Schools with a Feeding Programme 2009		Schools without a Feeding Programme 2009	
School A		School H	
Term 1 Mean	17.64	Term 1 Mean	14.56
Term 2 mean	14.56	Term 2 mean	13.25
Term 3 mean	15.67	Term 3 mean	12.56
mean	15.95	mean	13.45
School B		School I	
Term 1 Mean	15.23	Term 1 Mean	14.25
Term 2 mean	14.65	Term 2 mean	13.78
Term 3 mean	14.67	Term 3 mean	14.27
mean	14.85	mean	14.1
School C		School J	
Term 1 Mean	18.89	Term 1 Mean	14.26
Term 2 mean	19.45	Term 2 mean	16.78
Term 3 mean	19.99	Term 3 mean	15.87
mean	19.44	mean	15.63
School D		School K	
Term 1 Mean	21.81	Term 1 Mean	16.26
Term 2 mean	21.67	Term 2 mean	15.21
Term 3 mean	22.35	Term 3 mean	12.27
mean	21.94	mean	14.58

School E		School L	
Term 1 Mean	17.98	Term 1 Mean	13.25
Term 2 mean	16.82	Term 2 mean	13.67
Term 3 mean	17.56	Term 3 mean	12.78
mean	17.45	mean	13.23
School F		School M	
Term 1 Mean	18.67	Term 1 Mean	13.27
Term 2 mean	18.56	Term 2 mean	14.16
Term 3 mean	18.34	Term 3 mean	13.27
mean	18.52	mean	13.56
School G		School N	
Term 1 Mean	14.35	Term 1 Mean	18.26
Term 2 mean	18.24	Term 2 mean	18.87
Term 3 mean	17.27	Term 3 mean	19.26.
mean	16.62	mean	18.79

Pre-schools within Kikuyu District do a standard examination every term. Table 4.13 shows the end of term results for pre-schools, which were with the feeding programme and those that were without it. The comparison of the mean of schools which had a feeding programme with those which did not have a feeding programme shows that those pre-schools which had a feeding programme had performed better than those that did not have a feeding programme. The lowest mean for the schools which had a feeding programme was 14.85, while the lowest mean for the schools that did not have a school feeding programme was 13.33. The highest mean for the schools that had a feeding programme was 21.94, while the highest mean for the schools that did not have a feeding programme was 18.79.

This clearly indicates that an SFP was one of the factors that contributed to performance of preschoolers. The fact that some schools which did not have a feeding programme were performing better than those that had a school feeding programme shows that there were other factors that contributed to improved performance and not a feeding programme alone.

Table 4. 15: Effects of School Feeding Programme on Performance

	Schools with a Feeding Programme			
	No of pre-schoolers in SFP	Mean in exam	No of pre-schoolers not in the SFP	Mean in exam
A	110	80.34	19	76.34
B	102	84.62	none	--
C	55	82.11	5	63.21
D	40	90.12	6	65.23
E	32	91.56	none	--
F	100	92.36	8	61.24
G	202	94.35	none	--

The researcher administered an examination to the pre-schoolers, who were in the schools with a feeding programme. As shown above by table 4.15, those pre-schoolers who were in the feeding programme performed better than those without. This indicates that a feeding programme had an influence on their performance.

4.6 Challenges affecting the School Feeding Programme

The researcher sought to know the problems faced in sustaining the SFP. In this regard, the respondent head teachers indicated problems like:

- Inability to provide quality food which is well balanced
- Some parents being uncooperative
- Some parents don't give their children food claiming they will eat at school
- Inability to provide enough quantity for meals to the pre-schoolers
- Extra costs of hiring a cook

On their side, the teachers noted that the challenges they face in sustaining the feeding programme in their school included:

- Some parents refused to give children food at home
- Lack of facilities; some schools lack proper facilities to facilitate school feeding programme. In some pre-school this was a challenge since some parents were so poor.

The researcher also sought to know how the problems faced in sustaining the feeding programme could be addressed and the head teachers indicated the following:

- All parties need be involved and need be accountable; that is parents, teachers, pre-schoolers and the external feeding partner
- The WFP should ensure continued availability of the adequate food in the schools.
- Parents should not neglect their role in feeding their children at home

To improve the feeding programme the teachers recommended that:

- All stakeholders to work together; parents, and teachers
- Parents to continue feeding their children at home to complement the feeding programme

Problems Encountered By Cooks In Implementing The Feeding Programme

In regard to the preparation of the feeding programme, the respondent cooks indicated they encountered problems like:s

- Inadequate food materials due to tight budgets.
- Many children rely wholly on the school given meals
- Firewood is a rare commodity in the area and it is very expensive.
- Their pay is low since the parents are not able to contribute much for their wages.

To address these problems, the respondent cooks noted the following;

- All parents should take care of their children's meals after school.
- They wished the government could expand the free primary education programme to include school feeding programme.
- They also hoped the head teacher and the PTA would revise their salaries

4.7 Findings from the Researcher's Checklist

The researcher took some time to visit the pre-schools so as to have an in-depth understanding of the feeding programme. The researcher first noted that the teachers were trained and that they handled the children well in school. Though it appeared like the level of boys enrolled in the schools were high, the researcher noted that the ratio was almost 1:1. Further, the researcher was quick to note that the pre-school classrooms were made of timber and wood with earthen floor in majority of the schools (66.7%).

The researcher further noted that all children in the school with the feeding programme took lunch at school, while the children in the other schools carried their own food. The children took two meals, porridge at break time and food during lunch time. There were wooden benches in the class rooms which were also elevated to make desks. Only 22% of the schools had chairs and desks.

The food was served by the cooks who were supervised by the teachers. The researcher noted a pile of firewood near the kitchen which implied the type of fuel used was firewood. The children lacked play items and some schools failed to amend damaged swings and seesaws. The most common play materials in all schools were tyres and swings which were made of locally available materials. This meant that tyres and swings represented 78% of all the playing facilities in the pre-schools.

Finally, the researcher took time to study the children in the morning, before lunch and after lunch. The findings indicated that in the morning the children looked happy to be in the school, although they looked pale. This could have been due to lack of breakfast in the morning and poor diet in their evening meals. Those interviewed, especially from schools outside the feeding programme, indicated they even had to sacrifice some evening meal to

get enough carry to school to avoid discrimination. Some hours before meal the children looked jovial and were in a hurry to leave the classrooms. They were observed to fight and made irregular queues to be served first. The best moments were in the afternoon after the meals where the children looked happy and satisfied and concentrated in class. However, some pupils engaged themselves in play and slept peacefully in the afternoon.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussion of key data findings, conclusion drawn from the findings highlighted and recommendation made there-to. The conclusions and recommendations drawn were focused on objectives of the study which were to; find out the nature of SFP in Kikuyu District, establish the effects of the programme on attendance and enrolment of preschoolers in Kikuyu District, determine the effects of the feeding programme on the performance of pre-schoolers and explore the challenges affecting the head teachers in the implementation of the programme.

5.2 Summary of Findings

In regard to the nature of SFP, the researcher wanted to know if they existed, how long they had been operated, what promoted the need to have feeding programmes in the school, whether meetings with parents were held to create awareness on the feeding programme and how many parents attended, the person financing the programme, problems they face in sustaining the school feeding program, How the programme is organised in the respondent school, types of food and water offered by the school, who cooks the food and how the children are served, the number of children enrolled in the schools and their performance.

The study found out that all the schools had a feeding programme in the beginning but in the present only 23% of the schools had a feeding programme. This implied that 77% of the respondent school did not have a feeding programme in the present. Out of all the respondent schools, 71.4% had the programme for a period of one to five years, while only 28.6% had for a period of six to ten years. This implied that the idea of SFP was not practiced for long.

All the head teachers confirmed that they had called a parents' meeting to create awareness concerning the feeding programme, whereby each child was represented by his/her parent. Out of all the respondents school only seven pre-schools had a feeding programme in the present. Therefore, the researcher took this number to represent the sample of the pre-schools having a feeding programme.

In regard to water offered, 57.1% of the respondent schools used piped water, while only 42.9% of the respondent schools used boreholes. This is to indicate majority used piped water.

All the respondents indicated that the person who cooked was an employed community member and that the children were served by the cook. The cooking equipments/utensils are kept in the kitchen and all respondent schools indicated they used firewood and charcoal to cook.

Out of the two respondents who did not have a feeding programme, head teachers indicated there are children who do not carry food to school. They further mentioned that such children are sent home during lunch hour and their parents are advised accordingly. All the respondent schools with a collaborative programme noted that they ask parents to contribute towards a common meal. The school menu in all schools was porridge for break and ugali/rice for lunch interchangeably. Out of all the respondent schools in the feeding programme, 40% gave a banana after meal to the pre-schoolers. This was noted as the most locally available fruit.

Further, the study revealed that the teachers usually met with the head teacher and discussed how to make the school feeding programme better. They discussed issues to deal with, meal times, food serving, how the meals were prepared, need for additional of facilities and to give any feedback on the programme as conveyed by the pre-schoolers. They all agreed that the meetings had an impact on the feeding programme where the issues discussed were looked into to improve the programme performance in delivering service and the quality of meals. They also conveyed the feedback to WFP.

The researcher also wanted to know if the parents supported the feeding programme, from the findings 84.3% of the parents supported the feeding programme while 16.7% of the respondent parents did not have the programme in their schools so they did not support it. The respondent parents indicated they supported via constructing the kitchen, paying the cooks, offering facilities like, spoons, plates, and sufurias, offering materials like firewood, they take part in kitchen cleaning activities and volunteering to serve the children.

Through the feedback, the researcher gathered that the parents encourage their pre-school children to eat at school. Also, it was of importance to note that the parents discussed the nutritional value of the feeding programme with the school management occasionally. In regard to the contributions they make towards the programme, the parents indicated they are charged once per term and that the amount is enough compared to the burden relieved on them; they only cater for dinner after school.

The children liked the food given at school because it was adequate and of good quality. This was preferred as compared with food they took at home, where they had to share with their other siblings. The parents also agreed that the quality of food was good and healthy. The programme offered two meals according to the respondent parents. They also noted that they understand the school menu where their children get porridge for tea break and rice/ugali for lunch.

The parents noted that the feeding programme had benefited their children positively and gave out the following advantages to the programme: Offers their children a balanced diet, allows time for their children to read since they don't have to think about their lunch meal, offers a good base for concentration in studies and allows all children to view others equally since they eat a common meal.

The cooks indicated that they were not trained cooks, but from experience they had mastered the art of food preparation, especially for children. Majority of the cooks (66.7%) had been working in their current stations for a period of zero to five years, while the rest of the respondent cooks (33.3%) had worked for a period of five to ten years. Table 4.12 gives the same findings.

The cooks further indicated that they cooked ugali and rice interchangeably throughout the week, from Monday to Friday. The food products were obtained locally, since majority of the parents were farmers. These included green vegetables, maize flour and fruits. Other products were purchased from the supermarket by the head teacher. The vegetables were purchased by one of the cooks. Firewood and charcoal was used as the main energy sources of energy in the preparation of food in the schools.

From the findings, the researcher concluded that the number of children enrolled in the schools was high in the year 2006 followed by the year 2009, while remaining the same in the years 2007 and 2008. This could have been as a result of the feeding programme being present in earlier years in all the respondent schools, but was not present in all schools by the year 2009. However, due to an increase in performance as the years progressed there could have been an increase in enrolled in the year 2009. Levinger (1989) indicated that SFPs make a difference in enrolment and attendance of children to school. He also added that the programme also helps poor families by giving their children a good meal each day and thus saving family food. SFPs cannot be expected to make a direct measurable contribution to combating malnutrition among school children. According to a WFP 2008 survey, the net enrolment rate for boys and girls raised from 77% in 2002 to 97% in 2007 in Kenya, due in part to free primary education and in part the provision of school meals.

From the findings, in the years 2008 and 2009, the schools that had a feeding programme had a higher attendance than the schools which did not have the programme. This shows that a feeding programme is one of the factors influencing the attendance of the pre-scholar.

In the area of performance, the head teachers from the schools with the feeding programme confirmed that there has been an increasing trend in performance with many pre-schoolers being attentive in class. However, one of the pre-schools performances was constant and sometimes going in a low trend, but it was attributed to other factors like poor classrooms and family related issues. On the other hand, schools out of the feeding programme had an increasing trend in performance during earlier years, while in the present years the trend was in the decline. This was most likely attributed to changes in the feeding programme in the area.

All the teachers from the schools offering the feeding programme further graded their school feeding programme as good and all respondent teachers noted the effects of the feeding programme on performance as good. This indicated that the feeding programmes had a positive impact on performance. This was further supported by the fact that children's participation in activities before meals was slow and there was poor concentration as opposed to participation after meals where concentration was good and the children were jovial. The children's favorite meal was ugali.

According to the teachers, their role as far as SFP is concerned is to ensure that children are taken care of adequately, since this affects their class work. Also, they work as intermediaries between the children and head teachers. They also indicated that they recommend which meals were to be given to children and that they checked on quality service delivery among the cooks.

The respondents noted that the child's performance had been on the increase mainly because the children were comfortable. Some parents (15% of the parent respondents whose children carried food to school), noted that their children performance was inconsistent and in the decline. Some children had to sacrifice dinner to get food to carry to school.

Finally, all the respondent parents noted their children's performance since he/she joined the pre-school had been good. Those parents whose children were not in the programme noted there were some disagreement between the management, and parents which led to the stopping of the programme. They wished it could be re-adopted since their children were really affected and it was hard for them to take them to schools with the programme. All respondent parents were of the opinion for government to come in and support SFP in primary schools under the free primary education. This would improve learning and performance. A research conducted by Pollit (1984), revealed that there is a three-way relationship between health, nutrition and psychological development of a child, which influences food intake and absorption.

The comparison of the mean of schools which had a feeding programme with those which did not have a feeding programme revealed that those pre-schools which had a feeding programme had performed better than those that had none. The lowest mean for the schools which had a feeding programme was 14.85, while the lowest mean for the schools which did not have a feeding programme was 13.33. The highest mean for the schools which had a feeding programme was 21.94, while the highest mean for the schools which did not have a feeding programme was 18.79.

This clearly indicates that a feeding programme was one of the factors that contributed to performance of pre-schoolers. The fact that some schools which did not have a feeding

programme were performing better than those that had a school feeding programme shows that there were other factors that contributed to improved performance.

The researcher administered an examination to the pre-schoolers who were in the schools with a feeding programme. The pre-schoolers who were in the feeding programme performed better than those not in it. This indicates that a feeding programme had an influence on the performance of pre-schoolers. Meyer (1999) argued that SFPs are one of several interventions that can address some of the nutrition and health problems of school-age children. SFPs, and other school-based nutrition and health programs, can also motivate parents to enroll their children in school and to see that they attend regularly.

The researcher sought to know the problems faced in sustaining the school feeding programme. In this regard, the respondent head teachers indicated problems like inability to provide quality food, which is well balanced, some parents being uncooperative, some parents not giving their children food, claiming they will eat at school, inability to provide enough quantity for meals to the pre-schoolers and extra costs of hiring a cook.

On their side, the teachers noted that the challenges they face in sustaining the feeding programme in their school included some parents refusal to give children food at home, lack of facilities – some schools lack proper facilities to facilitate school feeding programme. In some pre-schools this was a challenge since some parents were poor. According WFP report (1993) schools that depend on the community to organise and implement SFPs offer certain advantages. These advantages include increasing the contact, and hence communication, between parents and teachers, officials and others; giving parents the opportunity to become more aware of what goes on at schools; and serving to raise the value of education/the school for parents and the whole community.

The researcher also sought to know how the problems faced in sustaining the school feeding programme could be addressed and the head teachers indicated the following: All parties need be involved and need be accountable, that is, parents, teachers, pre-schoolers and the external feeding partner, the WFP, should ensure continued availability of the adequate food in the schools and parents should not neglect their role in feeding their children at home.

To improve the feeding programme, the teachers recommended that all stakeholders work together, parents and teachers, to continue feeding their children at home to complement the feeding programme.

In regard to the preparation of the school feeding programme, the respondent cooks indicated they encountered problems like inadequate food materials due to tight budgets, many children rely wholly on the school given meal, firewood is a rare commodity in the area and it is very expensive and their pay is low, since the parents are not able to contribute much to their wages.

To address these problems, the respondent cooks noted the following – all parents should take care of their children's meals after school, they wished the government could expand the free primary education programme to include SFP and they also hoped the head teacher and the PTA would revise their salaries.

Summary of the Checklist

The researcher took some time to visit the pre-schools so as to have an in-depth understanding of the feeding programme. The researcher first noted that the teachers were trained and that they handled the children well in school. Though it appeared like the level of boys enrolled in the schools were high, the researcher noted that the ratio was almost 1:1. Further the researcher was quick to note that the pre-school classrooms were made of timber and wood with earthen floor in majority of the schools (66.7%).

The researcher further noted that all children in the school with the feeding programme took lunch at school, while the children in the other schools carried their own food. The children took two meals, porridge at break time and food during lunch time. There were wooden benches in the class rooms which were also elevated to make desks. Only 22% of the schools had chairs and desks.

The food was served by the cooks who were supervised by the teachers. The researcher noted a pile of firewood near the kitchen which implied the type of fuel used was firewood. The children lacked play items and some schools failed to amend damaged swings and seesaws. The most common play materials in all schools were tyres and swings which were made of

locally available materials. This meant that tyres and swings represented 78% of all the playing facilities in the pre-schools.

Finally, the researcher took time to study the children in the morning, before and after lunch. The findings indicated that in the morning the children looked happy to be in the school, although they looked pale. This could have been due to lack of breakfast in the morning and poor diet in their evening meals. Those interviewed especially from schools outside the feeding programme indicated they even had to sacrifice some evening meal to get enough carry to school to avoid discrimination. Some hours before meal the children looked jovial and were in a hurry to leave the classrooms. They were observed to fight and made irregular queues to be served first. The best moments were in the afternoon after the meals where the children looked happy and satisfied and concentrated in class. However, some pupils engaged themselves in play and slept peacefully in the afternoon.

5.2 Conclusion

This study revealed that all the schools had a feeding programme in the beginning, but some had dropped them. Parents called for a meeting to create awareness concerning the SFP, whereby each child was represented by his/her parent. In regard to water offered, majority of the schools used piped water. This study also concludes that the school menu in all schools was porridge for break and ugali/rice for lunch interchangeably. Majority of the parents supported the feeding programme by constructing the kitchen, paying the cooks, offering facilities like, spoons, plates, and sufurias, offering materials like firewood, taking part in kitchen cleaning activities and volunteering to serve the children.

The parent noted that the feeding programme had benefited their children positively and gave out the following advantages to the programme: Offers their children a balanced diet, allows time for their children to read since they don't have to think about their lunch meal, offers a good base for concentration in studies and allows all children to view others equally since they eat a common meal.

This research study also concludes that the feeding programme improved the attendance and enrolment of pre-schoolers. In the area of performance, this study concludes that feeding programme improves the performance of pre-schoolers.

The challenges that were faced in the implementation of the feeding programme were inability to provide quality food which is well balanced, some parents being uncooperative, some parents not giving their children food claiming they will eat at school, inability to provide enough quantity for meals to the pre-schoolers, costs of hiring a cook, increased number of children enrolling to the pre-schools and lack of facilities.

The study also revealed that the methods to solve the problems include all parties need to be involved and held accountable, the WFP should ensure continued availability of the adequate food in the schools and parents should not neglect their role in feeding their children at home.

According to Meyer (1989), alleviating hunger in school children helps them to perform better in school. This corresponds with the findings of this study where the performance of the pre-schoolers in the feeding programme was better than that of pre-schoolers who were not in the feeding programme. In the poorest parts of the world, school meal programmes can double primary school enrolment in one year (Sessional Paper, 2005). This was proved in the study where the schools which had a feeding programme had a better performance than those that had none.

5.3 Recommendations

From the findings, the researcher would wish to make the following recommendations: To begin with, the findings indicated that all head teachers and teachers were female. This could be limiting and in this regard the researcher would wish to recommend that the PTA works on recruiting teachers of both genders. This could also affect performance.

Secondly, the researcher found out that all the schools had a feeding programme in the beginning but in the present only 23% of the schools had one. This meant some schools had scrapped off the programme, which negatively affected the enrollment and the performance. The researcher, therefore, would recommend the management come up with solutions to

problems experienced earlier, so as to allow the programme again which would help improve performance in schools.

Thirdly, all the head teachers confirmed that they had called a parents' meeting to create awareness concerning the feeding programme, whereby each child was represented by his/her parent. In this regard, the researcher recommends that such meetings be held often to ensure the correct checks and balances are put in place.

Also, the researcher recommends there be established a committee to check on the recommendations given by the stakeholders on how to sustain the feeding programme.

It was revealed that the cooks have not undergone any training in cooking. A need for proper handling of food and cooking is essential for smooth learning of the programme. A cateress can be employed to monitor the programme, since she will be knowledgeable on that area.

Finally, all stakeholders are encouraged to work together for the well being of the programme in these schools. This will ensure continuity of the programme.

5.4 Recommendations for further studies

In relation to the findings and the conclusion in this study, the researcher recommends that further studies should be done on the impact of school feeding programme on the performance of pre-school children.

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APPENDICES

Appendix I: Head teachers Questionnaire

Introduction

Please respond to each question by ticking the appropriate response in the spaces provided. Your responses will be completely confidential and will be used by the researcher for the purpose of this study only.

Therefore, do not write your name anywhere in this questionnaire. You're kindly requested to respond to all items applicable to you.

1. Gender

Male []

Female []

2. Age

25 - 30 years []

31 - 40years []

41 and above []

3. Teaching experience

1 - 5yrs []

6 - 10yrs []

11- 15yrs []

15yrs and above []

4. How many years have you been to the present station?

1 - 5yrs []

6 - 10yrs []

11- 15yrs []

15yrs and above []

5. Does your school have an ECD section?

Yes []

No []

6. What is the enrollment of ECD learners?

Boys []

Girls []

Total []

7. Is there a feeding programme in the school? _____

8. For how long has the feeding programme been operated? _____

9. What promoted the need to have a feeding programme in the school?

10. Did you call a parents meeting to create awareness as concerns the school feeding program?_____

If yes, how many parents attended the meeting? _____

11. Who finances the feeding programme? _____

12. What problems do you face in sustaining the school feeding program?_____

13. How is the programme organised in your school?_____

14. For how long has your school been having the school feeding programme?

15. What types of food does the school offer?

Porridge []

Snacks []

Fruits []

Lunch []food

16. What type of water does you school use?

Piped water []

Treated /Boiled water []

Boreholes []

17. Who cooks the food?

Employed persons []

Teachers []

Community member []

18. Who serves the children with food?

Cooks []

Teachers []

19. Where are the cooking equipments/utensils kept?

Head teachers office []

School store []

Kitchen []

20. What type of fuel does the school use in cooking?

Paraffin []

Electricity []

Charcoal []

Firewood []

21. Are there children who do not carry food in the pre-schools?

Yes []

No []

If yes how do you cater for their needs? _____

22. Do you have a school rule asking all the children to carry food?

Yes []

No []

23. How has been the performance trend in your pre-school?

24. How many children were enrolled in pre-school for the last 4 years?

Years	No. of Children	Boys	Girls
2006			
2007			
2008			
2009			

25. How is your school menu?

DAY	BREAK	LUNCH
MONDAY		
TUESDAY		
WEDNESDAY		
THURSDAY		
FRIDAY		

25. How can the problems you face in sustaining the school feeding programme be addressed?.....
.....

Thank you for your contribution and co-operation

Appendix II: ECD Teacher's Questionnaire

This questionnaire is meant for the purpose of academic research only. Your opinion will be treated with a lot of confidentiality.

1. Gender

Male [] Female []

2. Age

23 - 30yrs [] 31-40 yrs [] 40 and above []

3. Teaching experience

1-5 yrs [] 6-10 yrs [] 11-15 yrs [] 15 yrs and above []

4. How many years have you been in the present station?

1-5 yrs [] 6-10 yrs [] 11-15 yrs [] 15 yrs and above []

5. How many ECD learners do you have in class?

Boys [] Girls [] Total []

6. Are you a trained ECD Teacher?

Yes [] No []

7. State the impact of feeding programme in your school?

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

8. Do you normally meet with the head teacher and discuss how to make the school feeding programme better?

Yes [] No []

9. If yes to (8) above, how often

Occasionally [] Often [] Very often []

10. What are some of the issues you discuss in the meetings in relation to school feeding programme and performance?

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

11. Do the meetings have any impact towards the feeding programme?

Yes [] No []

12. If yes above (11) how?

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

13. What challenges do you face in sustaining the feeding programme in your school?

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

14. How can you grade your school feeding programme?

Very Good [] Good [] Fair [] Poor []

15. What are the effects of feeding programme on performance?

Very Good [] Good [] Fair [] Poor []

16. Comment on children's participation in activities

Before meals

After meals

17. What are children's favourite meals?

18. What is your role as far as school feeding programme is concerned?

.....

19. Comment on the performance of children in pre-school?

.....

20. What do you think can be done to improve the school feeding programme in your school?

.....

Thank you for your contribution and cooperation

Appendix III: Interview Schedule for Pre-School Parents

This questionnaire is designed to gather information on the ongoing research to seek your opinion on feeding programme in the school where your child learns. Your opinion will be treated with a lot of confidentiality. This information is purely for academic purposes.

(Put a tick where applicable)

1. Gender

Male [] Female []

2. Marital Status

Married [] Single []

3. How many children do you have?

Yes [] No []

4. Do your children go to school?

Yes [] No []

5. Do your children take their lunch in school?

Yes [] No []

6. If yes (5) above do they complain on anything about the food?

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

7. Do you support the school's feeding programme?

Yes [] No []

8. If yes (7) above, how?

.....

9. Do you encourage your pre-school child to eat at school?

Yes [] No []

10. Do you go to school to discuss the nutritional value of school feeding programme?
Never [] occasionally [] Often [] Very often []

11. Are you charged any amount of money towards the school feeding programme?
Yes [] No []

12. If yes (11) above, how much?
Once per term [] Once per year [] Others specify []

Is this amount too much, too low or enough? _____

13. Has the performance of your child improved due to school feeding programme?
Yes [] No []

14. Does your child like the food given at school?
Yes [] No []

If Yes / No why

.....
.....

15. Comment on the quality of food provided in the school
.....
.....
.....
.....

16. How many meals does the program offer daily?

17. Do you know how the school menu is?

Yes [] No []

18. What role do you play in support of the feeding programme?

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

19. Explain how your child benefits from the school feeding programme.

.....
.....

20. What are the advantages of the school feeding programme?

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

21. How has been the performance of your child since he/she joined the pre-school?

Very Good [] Good [] Bad []

22. Is there any problem with the school feeding programme?

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

23. Which opinion would you give to help improve the school feeding programme?

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

Appendix IV: Interview Schedule For The Cook

Introduction

This questionnaire is designed to gather information for the purpose of academic research. Your opinion will be treated with a lot of confidentiality.

SECTION 1

1. Name of the cook _____

2. Age:

20-25 []

25-30 []

31-36 []

3. Marital status: Married []

Single []

4. Religion:

Christian [] Muslim [] any other _____

5. Education background

1. Primary []

2. Secondary []

3. University []

SECTION 2

1. Are you a trained cook? Yes [] No []

2. How long have you been working here? _____

3. What kind of food do you cook on various days

Monday []

Tuesday []

Wednesday []

Thursday []

Friday []

4. Where's the food product obtained from?

5. Who purchases the food?

6. What kind of fuel do you use to cook the food?

Charcoal []

Firewood []

Paraffin []

Gas []

7. Who serves the food to the children?

8. Where do you get water from?

Tap []

River []

Rain []

9. Which problems do you encounter in the preparation of the school feeding programme?

10. How best do you think these problems can be solved?

Thank you for your contribution and cooperation

Appendix V: Observation Check List

This questionnaire is designed to gather information for the purpose of academic research. Your opinion will be treated with a lot of confidentiality.

1. Name of the pre-school

2. Name of the teacher

3. Is the teacher trained? Yes [] No []

4. Enrolment of the pre-school children

Number of: Boys [] Girls []

5. Type of pre-school classrooms

6. Type of floor, Cemented [] Earthen []

7. Number of children taking school lunch _____

8. Time the meals are taken Break time [] Lunch time []

9. Do the teachers take the same kind of food? Yes [] No []

10. Kitchen: Types of meals

Time taken _____

11. Types of furniture used

i) Benches [] ii) Chairs [] iii) Desks []

12. People who serve the food Cooks [] Teachers []

13. Type of fuel used Charcoal [] Firewood []

Gas [] Any other []

13. Play Facilities /Equipments

Facility	Availability	Adequacy	Condition
Swings			
Seesaws			
Climbers			
Slides			
Tyres			
Others			

14. ACTIVITY LEVELS OF CHILDREN

Time of the day	Activities	Comment
Morning		
Before snack /Lunch break		
After snack/Lunch		

Appendix VI: Number work

BABY-CLASS

NAME..... DATE

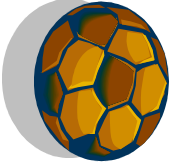
Colour the numbers.



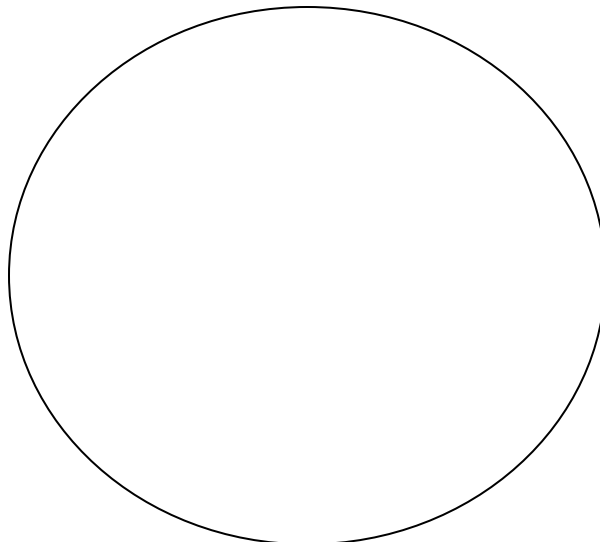
Match the pictures



Read the pictures



Colour Objects



Appendix VII: Reading

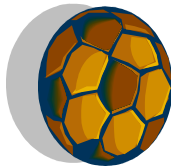
NURSERY

NAME DATE

Read the sounds

a b c d e f g h I j k l
m n o p q r s t u v w x
y z

Read the pictures



Re-copy numbers 1-10.

1		3	4		6				10
---	--	---	---	--	---	--	--	--	----

Count the balls

$$\text{OOOOOOOOOOOOOOOO} = \underline{\quad}$$

$$\text{O} = \underline{\quad}$$

$$\text{OOOOOO} = \underline{\quad}$$

$$\text{OOOOOO} = \underline{\quad}$$

$$\text{OOO} = \underline{\quad}$$

$$\text{OO} = \underline{\quad}$$

Match the numbers

3

7

7

2

6

3

5

6

2

5

Draw the balls.

$$6 =$$

$$2 =$$

$$3 =$$

$$1 =$$

Fill the gaps with “a”

B__

h__

z__

D__

k__

p__

F__

l__

j__

Re-copy sounds a-t

a	b	c	d	e	f	g	h
i	j	k	l	m	n	o	p
s	t						

My name is _____ (orally)

My teachers name is _____ (orally)

My schools name is _____ (orally)

Appendix VIII: Number Work

NURSERY

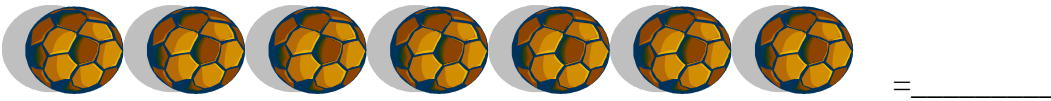
NameDate.....

Write the missing numbers.

1, _____, 3 _____, 5, _____

2, 3, _____, _____, _____

Count



Draw the balls

$3 =$

$7 =$

$2 =$

$4 =$

Add (+)

$2 + 1 =$

$4 + 3 =$

$2 + 2 =$

$5 + 2 =$

Take away (-)

$6 - 4 =$

$7 - 3 =$

$8 - 5 =$

$5 + 2 =$

Write the numbers 1-10

Dictation

1

2

3

4

5

Fill in the missing letters

M__t

y__m

t__p

S__x

b__x

r__n

Write in capitals

a _____

b _____

c _____

d _____

e _____

f _____

g _____

h _____

I _____

j _____

Reading

Read the sounds

c r q s o m b
p l a z d g e
u

Read the three letter words

box egg zip up yam
pot on cat dot dog
sun is

kusoma maneno

a e l o u
ba be bi bo bu
fa fe fi fo fu
sa se si so su

ma-ma

fi-si

pete

da-da

kuku

jo-to

so-ma

si- si

he-ma

Appendix IX: Research permit

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams: "SCIENCETECH", Nairobi
Telephone: 254-020-241349, 2213102
254-020-310571, 2213123.
Fax: 254-020-2213215, 318245, 318249
When replying please quote

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Our Ref:

NCST/RRI/12/1/SS/517

Date:

11th June, 2010


Lucy M. Munyiri
University of Nairobi
P.o Box 30197
Nairobi

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Impact of School Feeding Programme on Performance of Pre-Schoolers in Kabete Zone in Kikuyu District*" I am pleased to inform you that you have been authorized to undertake research in *Kikuyu District* for a period ending *31st July, 2010*.

You are advised to report to the *District Commissioner and the District Education Officer Kikuyu District* before embarking on the research project.

On completion of the research, you are expected to submit two copies of the research report/thesis to our office.


P.N. NYAKUNDI
FOR: SECRETARY
Copy to: