IMPACT OF FEEDING PROGRAMMES ON PRE-SCHOOL CHILDREN’S’ SELECTED PERFORMANCE PARAMETERS IN KABARE ZONE, KIRINYAGA COUNTY, KENYA

BY

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JULY, 2018
DECLARATION

I declare that this project is my original work and has not been presented in any of the university/institution for consideration of my certification. This research project has been complemented by referenced sources during acknowledged where test, data (including spoken words), graphics, pictures or tables have been borrowed from other sources including internet, these are specifically accredited and references cited using current APA system and in accordance with anti-plagiarism regulations.

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This project has been submitted for appraisal with my approval as University Supervisor.

Signature……………………………………………Date………………………………………

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DEDICATION

This research is dedicated to the Almighty God for giving me the ability to complete this work and my family for standing with me throughout the entire project.
ACKNOWLEDGEMENT

I thank God the creator who gave me a gift of life with a purpose which I fulfill through this study. I am very grateful to a number of people whose contributions, suggestions and encouragement were crucial in the writing of this research project. I would like to thank my supervisor Dr. Juliet Mugo for her guidance and assistance in the writing of this research work. Secondly, I acknowledge the support that I received from my Wife and our children. Lastly, I won’t forget the Kirinyaga County education office, all teachers, parents, friends and colleagues who helped me when conducting this research. May God bless you all.
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<tr>
<td>AEO</td>
<td>Assistant Education Officer</td>
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<tr>
<td>BEFA</td>
<td>Basic Education for All</td>
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<td>CRS</td>
<td>Catholic Relief Services</td>
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<td>DEO</td>
<td>District Education Officer</td>
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<tr>
<td>EFA</td>
<td>Education For All</td>
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<tr>
<td>GHI</td>
<td>Global Hunger Index</td>
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<tr>
<td>IFPRI</td>
<td>International Food Policy Research Institute</td>
</tr>
<tr>
<td>MOEST</td>
<td>Ministry of Education, Science and Technology</td>
</tr>
<tr>
<td>M.D.G</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>NACOSTI</td>
<td>National Commission for Science, Technology and Innovation</td>
</tr>
<tr>
<td>N.C.P.B</td>
<td>National Cereals and Produce Board</td>
</tr>
<tr>
<td>NSFCK</td>
<td>National School Feeding Council of Kenya</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>U.N</td>
<td>United Nations</td>
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<td>UPE</td>
<td>Universal Primary Education</td>
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<td>W.B</td>
<td>World Bank</td>
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<td>W.F.P</td>
<td>World Food Programme</td>
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<td>WHO</td>
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ABSTRACT

The study was set to find out the impact of feeding programmes on selected performance parameters or indicators among children in Kabare Zone, Kirinyaga County which included: enrollment, attendance, retention and learning in pre-schools within the same zone. The feeding programs are normally put in place to help curb short term hunger problem among children from low socio-economic groups in order to ensure that they grow well in all areas of human development, thus boosting their enrolment, attendance, retention as well as learning. In Kabare there are some pockets of poverty as well as food insecure areas and a good percentage of children come from poor socio-economic families. In addition, most of them are consistently out of school and this motivated the researcher to find out whether their out of school behavior, could be related to non-existence of feeding programs in pre-schools. The specific objectives of this study were: to establish the status of feeding programs in pre-schools in Kabare zone; establish the influence of feeding programs on pre-school children’s enrolment, attendance, retention and learning. The theory of motivation by Maslow (1971) was employed to guide the descriptive survey study using a sample size of 8 (30%) pre-schools out of 26, 16 (40%) out of 40 teachers, and 264 (30%) parents of pre-school children out of 881. Data collection was conducted using observations as well as interviews for teachers and questionnaires for parents. To test the validity and reliability of research tools, piloting was done in four pre-schools (2 with a feeding programme and another 2 without). Data were analyzed quantitatively using frequency counts, percentages and means without going into establishing significant relationships between the study variables while qualitative data was analyzed thematically using narratives based on study objectives. Thereafter, findings were presented using pie charts, graphs and frequency tables. The results obtained reveal that the meal that was provided the most involved a mixture of maize and beans “githeri” while the meal that was provided the least was porridge. There was gradual but steady increase in enrolment in pre-schools with feeding programmes from 2013 to 2016. The results showed that enrolment was excellent in 6 schools and fair in 2 schools. The study findings further revealed that there was inconsistence in class attendance in schools which did not have SFP. The schools with no SFP had poor retention rate. The study concludes that feeding programme is one of the factors influencing the enrolment, attendance and retention of the pre-scholars. The study recommended that policies that guide the need to make SFP compulsory in pre-schools should be established since it improves children’s enrolment, attendance and performance.
CHAPTER ONE
INTRODUCTION

1.0 Introduction

This chapter shows the background to the above study, statement of the problem, purpose of the study, significance of the study, delimitations and limitations, assumptions and theoretical framework of the study.

1.1 Background of the Study

Schools feeding programmes (SFP) are planned series of activities or events that are put in place to assist vulnerable children particularly those in their early childhood. The programmes help children to acquire a good and firm foundation and help them to acquire the necessary skills to be used for social life. These skills may never be acquired by most children in Kenya because not all of them will attend school particularly those from low income families. The programmes further help to alleviate children’s hunger problems, ultimately and contribute in the attainment of global poverty reduction (UN, 2009). The programmes encourage school enrolment and also learning (WFP, 2000).

Studies done show that school feeding programmes can be used to reduce children’s dropout rates and at the same time increase enrolment if well implemented as (World Bank, 2011) observes. In Kabare, there exists a mixed population of families that live above and below the defined levels of poverty i.e. Those who live on less than a dollar a day, a majority of whom are single mothers with no source of income.
SFP’s have been established for children in different parts of the world. The special supplementation of food programme (SSFP), for example in the United States of America (U.S.A) as (IFPRI, 1992) shows, helped the country to save in its medical care costs for children and women. Similarly, in another study done in Jamaica (S. America), the government gave breakfast to children for a year and found that attendance rose by 2.3% points more than it rose for control group as (Powell et al. 1998, cited in Ahmed, 2004) indicate. A randomized controlled trial of a school breakfast programme in Peru also in South America conducted by Jacoby, Cueto and Pollit(1996), found out that there was higher attendance rates amongst children who were included in the school feeding programme compared to those who were not.

According to other studies carried out in America on SFP’s as United States (2007) shows, it was discovered that the impact was not the same simply because other factors can affect the programme outcomes. UNICEF (2002) reported that out of the many children in the world 60% of the 100 million are girls. For this reason, WFP conducts studies of school feeding programmes (SFPS) which rewards the families of girls who enroll and attend school regularly, with dramatic results. Recent statistics indicate that 69 million young children worldwide are not enrolled in primary schools and about a quarter of these children (United Nations, 2010), live in south Asia. In India for example, (Government of India, 1995) indicates that a mid-day meal programme was introduced by the government to boost enrollment, retention and attendance rates for children. The feeding programme as (India’s 2004 socio-economic survey) reveals, was used to evaluate its effect on the educational enrollment of young primary school children.
According to this survey, average enrollment rates of mid-day meal programme beneficiaries were 22.68 percentage points higher than those of non-beneficiaries. When restricted to public school children only, the programme effect rose to a 29.53 percentage point enrollment increase. They intended study in Kabare zone will find out if SFPS can increase children’s enrolment in school.

In Bangladesh, a targeted school stipend administered through Bangladesh’s food for education programme by Ravallion and Wodon (2000) had strong effects on school participation leading to an average of a 17.3% point increase in attendance rate for boys and a 16% for girls. By providing free and nutritious food during the school day, the programme was seen to significantly increase daily caloric intake as well as levels of proteins and iron for recipient children as (Afridi, 2011) notes. Therefore provision of free meals has the added benefits of keeping children in the school who would otherwise be too sick or weak to attend and improve academic achievements. Studies done in Sub-Saharan Africa especially in Mali, shows that the country depends on W.F.P and catholic relief services (C.R.S) to support their school feeding programme. Cambers (2008) observes that during the 2007-2008 school year, the school feeding programme provided cereal and oil that were used to serve hot noon time meal to 108,524 children in 712 rural public elementary schools, which equates to about 18% of the nation’s school-age children. In Mali, data by Traore and Maiga (2008) indicates that the programme has increased attendance and enrollment rates over the years where the government committed about us $8 million for school canteens in 2009 using a combination of funds from the national budgets and funds from donor countries.
Other countries in Africa such as democratic republic of Congo, South Sudan and Somalia are facing problems of hunger due to drought, civil war, diseases, and climatic changes and so on. School, feeding programme in these countries improves nutritional status of the children and hence high retention rates and good class performance as (Aselmau, Gilgau & Lehrer, 2008) show. The above literature however, is not in our local context and it would be more satisfactory to establish the real situation in Kenya where poverty levels are said to be below 46 % as (Strategic Papers 2014-18) reveal.

Kenyan School Feeding Programmes were launched in 1967 under the National School Feeding Council of Kenya (NSFCK) and peaked in 1986 when 60,000 pre-primary school children in 15 districts were involved. Two studies, one done in Kirinyaga county (Pieters et al 1977) and another one done in Nyambene district (meme 1996, meme et al 1998), showed that the children participating in these programmes were better off in terms of nutritional level and school performance than those not participating. Studies carried out in Maasai land by a private NGO (The Ann K. Tylor fund) found out that the nutritious meal of fortified blended porridge they provide to children helps in increasing school attendance and pupil’s academic performance. This programme benefits more than 450 school children in Maasai land. This kind of SFP has taken the burden off of children and their families, and allows the children to go to school. The SFP is also working towards achieving several Millennium Development Goals (MDGS). School meals improve children’s health which gives them the energy and concentration to focus on learning.
Recent studies in Kenya by the African Development Bank Group through a strategy paper (CSP) 2014-18 reveals that Kenya's level of poverty is estimated at 46%. In Kirinyaga County where the researcher conducted the study, poverty rate is estimated at 25.6% based on KIHBS data for Constituencies in 2005/6 and it was likely that it contributed to low school enrollment and dropout rates which could ultimately affect learning performance. Further, about 40% of pre-school children in the County did not attend or enroll in school as (MoE, 2008) pointed out. This study therefore was compelled to suggest that the low enrollments and school attendance could be as a result of factors related to SFPS and needed to be critically analyzed. In addition, the Government of Kenya (GOK) as (Onyimbo, 2007) notes, does not have the capacity to support and sustain school feeding programmes.

Ndungu (2010) highlights various other challenges such as inadequate funds and poor parental and governmental support that affect SFP’s. Implementation process of school feeding programmes (SFPS) may therefore not be properly carried out which could further be the reason why there was low enrollment, retention and poor learning performance of children in pre- schools in Kabare zone Kirinyaga county. The study precisely aimed to address these speculations by finding out whether or not there was a link between children’s enrollment/ retention and learning performance issues in pre- scholars in Kabare zone.
1.2 Statement of the Problem

The presence of school feeding programmes have been found to assist vulnerable groups of people particularly children during early years to acquire a good and firm foundation in preparation for future life. However, about 65% or there about of pre-school children in Kenya do not attend school as (Murungi, 2012) notes. Besides, about 40% of pre-school children in the area of study in Kirinyaga County do not attend or enroll in school (MoE), 2008). This is probably due to lack of SFP’S and hence the need to carry out this study.

Further, although school feeding programmes exists in some few pre-schools in Kenya, problems of delivery and proper distribution still exists. The Government of Kenya (GOK) neither has the capacity to support nor sustain school feeding programmes as reported by Onyimbo (2007). In Kabare zone, Kirinyaga County, the rate of enrolment, retention and performance of pre-school children is very low (MoE), 2008) which may be associated with food insecurity and poorly managed SFP’s. To make it worse, no study appears to have been undertaken in this zone to investigate whether poor implementation or lack of school feeding programme could be responsible for the low enrollment, poor retention rates and poor performance in pre-schools. There was therefore need to conduct the study.
1.2.1 Purpose of the Study

The overall purpose of this study was to find out the impact of feeding programmes on pre-school children’s performance in selected parameters such as enrollment, attendance, retention as well as learning activities in the area of study, Kirinyaga County in Kenya.

1.2.2 Objectives of the Study

The objectives of this study were to:-

i. To confirm the number of pre-schools with/ without SFP’s in Kabare Zone Kirinyaga County.

ii. To establish whether the types of meals provided in pre-schools in Kabare Zone, Kirinyaga county are well balanced or not.

iii. To determine the extent to which pre-school feeding programmes influenced children’s enrolment rate in pre-schools in Kabare Zone.

iv. To establish the extent to which pre-school feeding programmes influenced children’s daily attendance.

v. To find out the extent to which school feeding programmes contributed to children’s comprehension/ retention of learning content in pre-schools in Kabare zone.

vi. To explore strategies of enhancing school feeding programs for children.

1.2.3 Research Questions

i. How many pre-schools have/ have no SFPs in Kabare Zone, Kirinyaga County?

ii. What types of meals are provided in pre-schools in Kabare Zone, Kirinyaga County?
iii. To what extent is the influence of pre-school feeding programmes on children’s school enrolment rates?

iv. What was the extent of influence of pre-school feeding programmes on children’s daily attendance rates?

v. To what extent do school feeding programmes contribute to children’s retention of learning content in our pre-schools in Kabare zone?

vi. What are the strategies of enhancing school feeding programmes in Kabare zone?

1.3 Significance of the Study

This research may benefit the community as well as the Government (MOE) to appreciate the importance of school feeding programmes. Research finding from this study may also help the stakeholders to understand the need or importance of supporting school feeding programmes through funding for example from (CDF) money or from the county funds. The findings from the research may also be used by the Government to formulate policies regarding feeding programmes. Last and not least, interested future researchers in the area of school feeding programmes can use my findings for future researches in related areas.

1.4. Limitations and Delimitations of the Study

The following were the limitations and delimitations of the study.

1.4.1 Limitations of the Study

Due to time constraints, it was not possible to cover the larger Kirinyaga County but the challenge was overcome by the use of a manageable study sample constituting 30% (8)
pre-schools out of 26, 16 teachers out of 40 and 264 out of 881 population of parents targeted. Further, while findings of the current study may be typical of Kabare Zone and to a certain extent the Kirinyaga County, they may but with caution, be applied to other regions in the country with similar characteristics as the study locale.

1.4.2 Delimitations of the Study

The study was confined to pre-school children aged 4-6 years in Kabare Zone, Kirinyaga County, their teachers and parents. Moreover, it only focused on the influence of school feeding programmes on pre-school children’s performance rates in terms of enrollment, attendance, retention and learning.

1.5 Assumptions of the Study

This study was based on the following assumptions:

i. That the school feeding programmes are well organized and managed in all the pre-schools where it is available.

ii. That all the respondents selected would be available for the interview and return the questionnaires.

iii. Not all pre-schools had feeding programmes.

iv. That all the pre-school teachers and parents understood the importance of School Feeding Programmes and could fairly decide whether or not to have it in their schools.
1.6 Theoretical Framework and Conceptual Framework

The following are the theoretical and conceptual frameworks of the study;

1.6.1 Theoretical Framework

This study was guided by Abraham Maslow (1971) theory of motivation and hierarchy of needs. According to Maslow, naturally good physical shape and development in a person will occur in a healthy society. Maslow further shows that the environment should allow people to express their ideas, needs and also make their own resolutions. The surrounding should similarly provide the necessary materials to satisfy and sustain the needs. Maslow placed needs in an ascending order of importance starting from biological needs to need for self-actualization and that the lower or basic needs must be attained before the child can focus on the next level of needs.

Biological needs according to Maslow, sustain human life and they include: food, warmth, water, health care, rest and/or sleep. These needs should be satisfied in order for a child to develop properly and to achieve other needs. Biological needs are followed by security needs in children which may involve stability or being free from danger and fear of losing friends, play toys, being abducted and shelter. Social belongingness or acceptance needs, such as being loved and not discriminated or segregated upon but embraced well by others come next. Fourth in the hierarchy are esteem needs which cause satisfaction among children like having a feeling of prestige or importance, power, recognition and self-confidence. The final need according to Maslow is that for self-
actualization. This is the desire in the child to become self-developed or the best of what they can be. The five levels are illustrated on figure 1.1.

Figure 1.1 Illustration of Maslow’s Hierarchy of Needs
Source: Maslow (1954)

As figure 1.1 shows, food is a basic need, thus in applying the theory in pre-school settings, a hungry child is likely to be physically, mentally and socio-emotionally unhealthy, since aspects of growth and development (Berndt, 1997; Ingule, Rono and Ndambuki, 1996; Piaget, 1983; Freud, 1965; Erikson, 1963) are interrelated and inter
dependent. In this regard, the child cannot be motivated to focus on stability or security needs, making friends or enjoying their play company among other needs let alone attending school, learning or even retaining what he or she is taught. The child normal development fails to thrive due to worry about the aspects lacking in his or her environment. This child may fail to attend school or concentrate on learning and therefore perform poorly.

Provision of food as a basic need through school feeding programme is one way of supporting the performance component which comprises the following indicators: their enrolment into preschool, successful or regular class attendance, being retained in school and ultimately doing well in learning. Food as visualized by Maslow helps the child to grow healthy and to seek other needs like: safety, self-esteem, love and even self-actualization. Food enhances learning in a major way as a hungry child cannot learn properly as (Murungi, 2012) reveals. Such a child is miserable, weak and cannot concentrate nor retain learning content in school and he/she is likely to perform poorly.

Lack of basic needs mentioned above can also make a child absentee himself or herself from school and this may lead to the child dropping out of school. The researcher chose the theory of motivation and hierarchy of needs by Abraham Maslow (1971) because it fits very well with the intended study variables (see figure 1.2). Children in school must be fed with good quality food which is balanced and also adequate. After satisfying this basic need, they will be healthy and then be motivated to look forward to their enrolment into pre-school, attend school regularly, remain in school as needed hence positively enhancing their learning performance too.
1.6.2 Conceptual Framework

The conceptual diagram below (figure 1.2), shows the relationship between the dependent variables (children’s performance in relation to enrollment in pre-school, comprehension/ retention of learning content) while the independent variable which is school feeding programmes.

As shown in the conceptual diagram, it was envisioned that the existence or non-existence of school feeding programmes could positively or negatively influence the

**Figure 1.2 Conceptual diagram on effect of feeding programmes on preschool children’s performance**

Expected Outcomes

Improved performance in children’s:
- Physical growth & development
- Socio-emotional growth & development
- Enrollment/ attendance in pre-school
- Comprehension/ retention of learning content

Intervening Variables

Curbing non-existence of pre-school feeding programmes by:
- Establishing kitchen gardens
- Initiating income generating activities
- Mobilizing parents to introduce sustainable feeding programmes in pre-schools

Independent Variables

Impact of Pre-school Feeding Programme

Dependent Variables

Performance Parameters among Pre-school Children in terms of:
- Enrollment/ attendance
- Comprehension/ retention of learning content
extent to which pre-school children performed or progressed in their holistic growth, development and learning specifically in terms of: enrollment and comprehension/retention of content specified in their prescribed curriculum. Availability of school feeding programmes could give rise to healthy children who would be able to enroll in school without any problem, enjoy attending pre-school and remain in the centre. Ultimately it could translate to active participation in learning activities and good learning performance while reverse results may be expected for their non-availability. Non-existence of SFP can be dealt with through measures such as instituting kitchen gardens in pre-school and initiating income generating activities. This could lead to improved children’s holistic wellbeing and ultimately their participation in pre-school.
1.7 Operational Definitions of Terms

**Attendance**: Action of children regularly going to pre-schools sampled on a daily basis within one school term.

**Enrolment**: Admission through registration of children in sampled pre-primary schools.

**Health**: A state of physical, mental and social well-being of 3-8 year old children, leading to good participation in preschool.

**Performance Parameters**: It referred to number of children admitted to preschool, extent to which they were present in school and how well or not they attended to learning activities as a result of availability/ non availability of SFP.

**Pre-School Children**: These are individuals aged 9 years and below in a centre offering care.

**Retention**: Action of children remaining in sampled pre-schools for duration of at least one year.

**School Feeding Programmes**: It is a plan intended to provide meals to children in pre-school.
CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

In this chapter, emphasis is on the influence of school feeding programme on the attendance, enrolments, participation and learning performance of the pre-school children. This section deals with overview of the history and advantages of SFP, its influence on participation, enrolment, retention, learning and strategies to enhance SFP.

2.1 Overview of School Feeding Programmes

A School Feeding Programme (SFP) is a scheduled activity designed to provide food to children such as those in pre-school. Ideally, it is supposed provide enough nutritious and a balanced diet to a selected group of children in order to foster their holistic growth and development, including school enrolment, attendance and retention.

Oyefade (2014) discusses school feeding programme based on two different perspectives: in-school meals and take-home rations where families are given food if their children attend school. First, in-school meals have been the most popular modality of the school feeding interventions. Akanbi (2013) also considered grouping the school feeding into two common categories: programme that provides meals and programme that provides high-energy such as biscuits or snacks aimed at generating greater impacts on school enrolment, retention rates, and reduce gender or social gaps.
The emergence of school feeding programme was traced to the 1930s by Tomlinson (2007) in the United Kingdom and the United States of America with a focus on improving the growth of children particularly from families in low income bracket. UNESCO (2010) affirms that poverty is one of the obstacles contributing to poor educational achievement and academic growth because hungry children cannot concentrate in school. SFP’s

This was most important because as child development theorists namely Berndt (1997); Ingule et. al. (1996); Piaget (1983); Freud (1965); Erikson (1963) divulge that aspects of growth and development are not only interrelated but also interdependent. A child’s physical needs for example, may therefore affect his or her mood, thus he or she may not relate well with others in class nor concentrate in other areas that are important in their lives such as learning.

Precisely, Netherlands became the first country in 1900, to move the programme to a new level of incorporating school meals into a national legislation. By the 1930s, the United Kingdom and the United States had also instituted the school feeding programme as part of their national programmes. A further account indicates that school feeding initiatives have been in existence since the late 1700’s and originated as projects of donors in Europe.

The United States of America began the practice of initiating school feeding programmes in Austria as an act of international aid focused on combating the severe malnutrition of
children in the 1940s after the Second World War. Since then, school feeding programmes have become a key part of food assistance, relief emergency and development programmes. School Feeding Programme is a social safety net for children and as part of the national development goals. It provides an important new opportunity to assist poor families and feed hungry children. It provides incentive for poor families to send their children to school and keep them there. In order to improve the nutritional status of school children, the Federal Government of Nigeria launched the Home-Grown School Feeding and Health Programme in September, 2005 under the coordination of the Federal Ministry of Education. The programme aimed to provide pupils with adequate meal during the school day (FME, 2007, as cited in Adekunle & Ogbogu, 2016).

Hungry children cannot enroll in school nor attend or remain in school let alone paying attention in class. According to World Food Programme (2008), hunger is one of the most pervasive and damaging phenomena for millions of children today. It has far-reaching effects on the development of both individuals and nations. Hunger negatively affects the brain development of children and impedes their chances of educational success later on. When children are hungry, chances that they would attend school are limited, and without education, their chances of breaking poverty trap are significantly reduced.

School feeding programmes were started in the early 1930s in United Kingdom and the United States of America (USA). Their major concern was to improve the holistic growth of young children as (Richt, Griesel & Rose, 2000) notes. The WFP (2008) observed that
school children are particularly vulnerable to short-term hunger, especially where diets of poor quality are consumed. Factors such as the long distances children walk to school, having to complete chores before going to school and poor quality and quantity of meals consumed at home, contribute to hunger in school children. Children who come to school hungry have diminished attentiveness, a greater likelihood of becoming distracted and a lack of interest in learning, resulting in failure, low achievement and repetition.

In the UK free school feeding programmes were withdrawn from all schools except for children considered to come from poor backgrounds and therefore needy. Many countries in the world introduced SEPs in response to particular needs for example Brazil in South America introduced its school nutrition and food security programme (SNFS) in their schools after the end of Second World War. The country’s SFP was funded by the United Nations as well as the United States Agency (USAID, Swartz, 2009). Local schools meals councils were established to the country to manage the implementation of the programme (WFP, 2010) notes.

In Africa, countries such as Zimbabwe started their school feeding programmes (SFP) which were carried out and funded by the WFP and other NGO’S such as World Vision, CARE International among others. Their school feeding program targets children in the lower grades as well as children who are orphaned and vulnerable. The young disadvantaged children eat cornmeal porridge during break time (Catholic Relief Services 2004). This country restarted its SFP in the outbreak of the 2002 drought to fight the impact of hunger and increase school enrolment.
In Malawi and ZAMBIA their SFPs were supported financially by the United Nations, the World Bank and WFP (WFP, 2010). In Malawi the programme is called the food for education (FFP) which offers snacks in order to reduce short-term hunger and hence achieve the intended objective for improving school enrolment, attendance, participation and learning (Swartz, 2009). The pre-school children in Kabare zone should be fed with at least a cup of porridge during break time. This would help to reduce their short-term hunger and hence improve their participation in learning.

In Kenya, the national school feeding programme started in the early 1967. It was supposed to use locally produced foods from the national cereals and produce board (NCPB). The feeding programme was later supported financially by the WFP and other development partners (UNICEF, 1994). Their main objective was to achieve universal primary education (UPE) in the ASAL areas and maintain regular attendance, increase enrolment participation and learning outcomes in schools. During the study, efforts were made to find out whether or not children in preschool are provided with lunch or not.

2.2 Influence of SFP’s on Children’s Enrolment

Children’s enrolment was the first step towards them being in school but the extent to which School Feeding Programme (SFP) influenced this realization was an important subject under scrutiny. According to Sachs (2005) SFP exclusively benefited poor children by creating incentives to enroll and attend schools as well as improve general attentiveness and capability to learn. School-based food distribution in Bangladesh increased enrolment to 20 percent at a time when enrollment at non-participating schools
was 2 percent as (Gilligan, 2009) reports. A study by Yendaw and Dayour (2015) which sought to assess the contribution of national school feeding programme towards pupils’ enrolment and retention in Ghana examined enrolment by looking at two periods where parents enrolled their children in schools, before and after the implementation of the School Feeding Programmes (SFP). The findings of their study indicated that enrolment before the introduction of the SFP stood at 35.8%, but increased phenomenally to 64.2% after the implementation of the programme.

Osei-Fuso (2011) observed that school feeding programmes and other school-based nutrition and health programmes motivate parents to enroll their children in school and to see that they attend school regularly. World Food Programme case studies in some West African countries like Niger similarly documented strong improvements in enrolment when families received food incentives in return for good school attendance (WFP Report, 2010). This report advocated that school meal has significant positive effect on such indicators as primary completion rates, continuation to secondary and exam scores. Specifically, enrollment is higher, particularly in early grades in the schools that offered school meals.

Primary completion rate is also higher when meals are present, particularly for girls. Higher percentages of children move into secondary school from primary schools that offered meals. Further, the report contends that children in schools with regular meals scored over 300 in their KCPE exam (WFP Report, 2010). In Kenya today, large percentage of children drop out at primary level and for those who go through secondary
education, most of them fail exams. This may be attributed to many factors, poor implementation of SFP being the major one. Does this phenomenon also occur in pre-schools? This study sought to establish the influence of SFP on children’s enrollment at pre-school level in Kabare Zone in Kirinyaga County, Kenya.

A study by Lamber (2009) in Burkina Faso based on SFP revealed that school gross enrollment in rural schools in Sahel region was the lowest in the country at 48.8% with high gender disparity, especially at the beginning of SFP in 2003. The programme began with 234 schools and 30,000 pupils in the statistics show that the admissions rate increased from 50.5% in 2003/4 the first year of the programme to 69.7% in 2008 while the gross rate enrollment also increased from 21.8% to 48.8% over the same period (Lamber & WFP, 2009).

Also the study carried out by World Food Programme (2006) in Zambia showed that after the introduction of SFP. The enrollment of children in basic schools increased from 11.1% of the total enrolment in 2002 to 20.1% in 2003 (WFP, 2010). A study conducted by Navuri (2011) in Tanzania revealed the enrolment of standard one in primary schools in 2007 was 8,396,925 from 6,562,722 by 2003, in which the average has risen from 90% in 2004, to 99% in 2010 while dropouts have declined from 6% to 3% (Navuri, 2011). Similarly, the current study attempted to ascertain the influence of feeding programme on children’s enrolment in pre-schools in Kabare Zone in Kirinyaga County, Kenya.
According to the analysis by Gelli (2006) conducted from WFP’s assisted 4,175 schools in 32 Sub-Saharan African countries which provided food to 21.7 million children in 2005 showed a 14% yearly increase in enrolment for both boys and girls. Similarly, the United Nations reported that providing children with take-home ratios in addition to school meals increased enrolment in 32 countries and particularly beneficial for girls in the primary schools (WFP, 2010). World Food Programme report also contemplates that 1.2 million children remain out of school. The enrolment in pre-school programmes continues to grow in Kenya, from 300,000 in 1973 to recent statistics of 951,997 but still 65% of children are not attending pre-school education.

A study in Bangladesh based on food insecure areas conducted by Ahmed (2004) showed that school feeding programmes have statistical significant positive impacts on both gross and net enrollment rates with 14.2% and 9.6% increases respectively. The data collection took place in 2003 after children in the treatment schools received a mid-morning snack of fortified wheat biscuits every school day for one year. However, this finding does not consider other characteristics of households that could not be observed in the treatment area that could affect household’s decision to enroll children. Thus, it appears inconclusive to claim that the difference in enrollment between treatment and control groups was the result of the program without considering unobservable factors. This study sought to fill this gap by sampling both teachers and parents in order to enhance the validity of the findings and conclusions through adequate comparisons.
Another study on 32 Sub-Saharan Africa countries shows that providing food in school under the Food for Education (FFE) scheme contributed to increasing absolute enrollment in WFP assisted schools by 28% for girls and 22% for boys in just one year (Gelli, 2007). After the first year, however, enrollment pattern showed variation depending on the type of FFE program, that is, whether the provision of food in school was combined with take home rations or was served alone. In those places where on-site feeding and take home rations were offered together, girls’ absolute enrollment kept on increasing by 30% subsequent to the first year. Meanwhile, schools that provided only on-site feeding have just recorded increase in an absolute enrollment that was same as before the feeding program was implemented.

According to Roy (2006), nearly 50% of the Kenyan population lives below the poverty line (less than one dollar per day) and have inadequate access to food. Moreover, Swadener, Kabiru and Njenga (2010) argue that apart from factors like children being retained in the extended family childcare systems to provide care to their younger brothers and sisters, lack of school fees, uniforms and other related expenses, lack of food at home prohibits children from participating in pre-school education, lack of SFP continues to be a leading variable that leads to low attendance and enrollment. Adelman, et al (2008) indicates that school meals influence the age at entry in different ways. First, the provision of food offsets the cost of education children by making available additional income in the household. Secondly, the neighborhood effect resulting from SFP may also influence the age at entry. That means the act of households to send their children to school earlier with the commencement of School Feeding Program would
create a social pressure and prompt similar action on the part of those who have not enrolled their children yet.

Enrollments have been noticed to increase gradually and sometimes decline completely in some places in Kenya. School Feeding Programme have led to increase in enrollments in some schools due to its consistency, while in others there have been a decline in enrollment in spite of provision of SFP. This proves that the SFP should not be underestimated. Ouko (2012) found out that SFP are an incentive to pupils which make them attend school. Ouko (2012) further revealed that with the provision of SFP, school attendance and enrollment may increase gradually or even decline due to other factors.

Lawson (2012) continues to maintain that there are consistent positive effects of SFP on energy intake, micronutrient status and school enrolment of children participating on SFP compared to non-participating children. However, SFP vary widely from country to country that design, implement and evaluate it. Lawson (2012) estimated that between the years 2003-2005, nine hundred and twenty three million children in the world were chronically hungry, many of whom were children from developing countries. The high population of hungry children and limited resources has sabotaged the implementation of SFP which in turn has affected school attendance and enrolment in schools. Malnutrition affects children’s cognitive performance as it reduces the capacity to participate in learning activities. Due to poor cognitive development, children are most likely to perform poorly and repeat classes (Bruhn, 2004). Duggan, Watkins, Walter (2008) linked
the improved rates of attendance and punctuality to the introduction of universal school
breakfast programmes.

Lack of SFP in schools may disadvantage vulnerable children who get little or no food at
t heir homes. According to Murungi (2012), such a child is not able to concentrate in
class, can be absent from school or may fail to enroll completely. This study therefore
contends that lack of SFP in school can lead to low enrolment and school attendance in
pre-schools. In Kenya, approximately 65% of children are not attending pre-school
education (Murungi, 2012). This could be attributed to inadequate and underfunded SFP.
Hunger affects learning in a big way. A hungry child cannot effectively learn since he/she
lacks energy to participate in school’s activities. Such a child is not able to concentrate in
class or interact with the environment effectively.

Along with enhancing enrollment, School Feeding Programs also help to adjust the age at
entry by attracting children during their right age. In poor countries like Ethiopia,
children may begin primary education much later than the recommended age for various
reasons. For instance factors such as lack of funds, lack of childcare and little awareness
about the benefit of enrolling children during the recommended age are some of the
causes for late entry (Alderman, Gilligan & Lehrer, 2008). Attendance increased from
73% to 95% among participants. The programme also claims to put additional food into
the hands of mothers and serves as a contact between mothers and teachers on
distribution days (WFP, 1995, 1996). During the study, attempts were made to find out
whether or not there was any link between SFP’s and pre-school children’s performance
in selected parameters (enrolment, attendance, retention as well as progress in learning
activities) in Kabare zone Kirinyaga County. In addition, efforts were made to find out whether or not the amount of food served to children was adequate in terms of quantity or not.

2.3 Influence of SFP’s on Children’s Attendance

An important factor in the current study was to determine to what extent SFP aided children’s attendance in pre-school. In the year 2000, the WFP, fed over 12 million children in various schools in 54 different countries in the world to attract them to attend schools where enrolment ratios were lowest. In a review 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 was found to improve enrolment and attendance. Levinger (1986) in her literature review on SFP (Brazil) concluded that it probably makes a difference in enrolment and attendance if they take into account the environment in which they operate. She also concluded that SFP should be introduced in all poor, unstable rural areas where enrolment and attendance are low.

A case study based in Ghana by Yendaw and Dayour (2015) on the effect of the national school feeding programme on pupils’ enrolment, attendance and retention showed that the perception of respondents regarding the quality and quantity of food prepared in school has demonstrated a very high influence on the school attendance patterns of pupils in the study area. The study further revealed that while 70.1% of children attend school throughout the week as a result of meals quality and quantity, as much as 63.2% of pupils attend school once a week due to negative perception about the quality and quantity of
food prepared in school. This implied that the quality of food prepared for pupils should be enhanced so as to boost enrolment and high attendance in the area. This study sought to establish whether the kinds of food provided to children in school have influence on the attendance.

In Bangladesh a programme of school-based food distribution increased attendance rates by 20% versus a 2% decline in non-participating schools (Ahmed & Del-Ninno, 2003). Successful schools began by engaging pupils and making sure they come to school regularly. Attendance in schools with School Feeding Programmes (SFP) was found to be 12 points higher than in schools without SFP (70% compared to 58% respectively). Dropout rates were also found to be 9 points lower in schools with SFP than in schools without SFP. Although School Feeding Programmes (SFP) may be expensive, its benefits could be achieved more cheaply. Food attracts children to school and reduces hunger while they learn. The programmes have considerably impacted on school participation in terms of attendance (Gilligan, 2009).

Provision of meals at school is an effective way of encouraging chronically hungry children to attend classes. According to Vermeerch and Kremer (2004), the average school participation is higher in pre-schools with school feeding programmes than those without. An evaluation carried out in Jamaica and Tamill Nadu (India) indicated that SFP increase attendance. A randomized control study carried out in Western Kenya demonstrated that children’s school participation was 30% percent higher among children attending school with SFP. The control study further found that children in the treatment
group participated 35.9 percent of the time compared to 27.4 percent in the comparison (control) group and this difference was statistically significant (Vermeerch, 2004).

The School Feeding programme increased participation of both children who were previously enrolled and children who would have gone to school in absence of the program. But they emphasize that any expansion in terms of school participation in the absence of qualified teachers falls short of better educational achievement since there are strong complementarities between teacher attributes and school meals. Pre-school participation has remained generally low due to other factors, major factor being lack of SFP. Is this situation the same for the case of Kabare Zone in Kirinyaga County, Kenya? This study sought to fill this gap in order to build a comprehensive knowledge on the influence of SFP on attendance in different settings.

A study conducted on 814 children in second-through fifth-grade classrooms in rural primary schools in Jamaica where children were randomly assigned to receive a breakfast (576-703 kcal and 27g of protein) or placebo (orange slice with 18 kcal) each day for one school year revealed a small improvement in attendance rates for children receiving breakfast over the control group (Powell, 1998 as quoted in Ahmed, 2004). However, this consequence is small since rates in both groups were about 70 percent even prior to the study. In a similar study in Huarez in Peru by Jacoby and Cueto (1996, as cited in Adelman, 2008), it was found that a school breakfast increase attendance rates of fourth and fifth-grade students by 0.58 percentage points in the treatment schools whereas it declines in control schools by 2.92 percentage points. The evaluation occurred 30 days
after the commencement of the breakfast program and following those 30 days the breakfast program was also implemented in the control schools. This study also attempted to compare the attendance trend between pre-schools with SFP and those pre-schools without SFP in Kabare Zone in Kirinyaga County, Kenya.

In Pakistan, a food 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. This incentive programme demonstrated that it could make a significant contribution to full attendance. In participating schools enrolment improved by 76% compared to 14% in the province overall. Therefore there is need to provided SFP in Kenyan pre-schools since it may decrease the percentage of children not attending school. In his study, Murungi (2012) found that 65% of children are not attending pre-school education. Even though factors like uniform, sickness, family affairs, lack of food at home, lack of fee levies, lack of SFP in many pre-schools may be a major contributing factor. This study sought to establish whether feeding programme has any influence on children’s attendance pre-schools in Kabare Zone.

A study conducted by Rodel Community scholars in 2008 at Arizona State University that tracked students from Kindergarten through high school found that dropout patterns were linked with poor attendance, beginning in Kindergarten. According to the National Centre for Student Engagement, schools are most effective in accomplishing high attendance rates when parents, school leaders and community members work together to focus on curbing absenteeism and truancy, and keeping kids in schools (Ranivnder,
According to Duggan, Watkins and Walker (2008) introduction of universal school breakfast programmes improve rates of attendance and punctuality and decrease rates of psychological symptoms. Similarly, Ahmed and Nimmo (2002) showed that SFP increased school attendance by a huge percentage. In their study, the overall rate of attendance in school with SFP was 70% compared to 58% in schools without SFP. The utilization of take home rations also led to a significant increase in attendance since it acts as an incentive to attend school. This therefore suggests that there was need for school feeding programmes in pre-schools. This study attempted to ascertain the extent of association between SFP and attendance among children in pre-schools in Kabare Zone in Kirinyaga County, Kenya.

2.4 Influence of SFP’s on Children’s Comprehension/Retention of Learning Content

Children’s comprehension and retention of learning content was a crucial factor of study and most important was the extent to which SFP’s could interfere with their ability to comprehend as well as remember what they had been taught. Studies done by Pollit (1984) in South America shows that school feeding programme affects the retention of children in school. School feeding roll maximizes children’s learning capacity and retains them in school. The researcher intends to find out whether schools with SFP retain more or less children in class in Kabare Zone Kirinyaga County. A pilot school feeding programme in Malawi was evaluated and was found to improve the retention rate of children in school (WFP, 1996). These children were attracted by the food offered in school to remain in class hence boosting their retention leading to good learning. Bundy
(2009) found out that SFP do not always achieve the same effect because factors like modality of SFP, gender of the beneficiaries and types of food provided can influence the programme outcomes.

A study by Yendaw and Dayour (2015) in Ghana explored retention by looking at the dropout rates of pupils before and after the implementation of the SFP. The findings of the study revealed that school dropout rates (73.8%) was higher among pupils before the introduction of the SFP compared to the period after the introduction of the programme with only 26.2% dropout rate. A chi-square test of the hypothesis that there is a statistically significant association between the implementation the Ghana school feeding programme and the school dropout rates among pupils gave (X²=29.767, df=4, P=0.000) indicating that the operation of the programme has significantly improved pupil’s retention in school compared to the period before the introduction of the programme.

According to Del-Rosso (2013) school feeding programmes and other school-based nutrition and health programmes motivate children to attend school regularly. Properly designed and effectively implemented SFPs can alleviate short-term hunger in malnourished or otherwise well-nourished school children. This helps to increase the attention and concentration of students producing gains in cognitive function and learning. When programmes effectively reduce absenteeism and increase the duration of schooling, educational outcomes (performance, dropout, and repetition) will be improved.
Evaluations of SFP in Burkina Faso found that school canteens were associated with regular attendance, consistently lower repeater rates, lower dropout rates in disadvantaged provinces, and higher success rates on national exams, especially among girls (WFP, 2006). Niger has one of the five lowest school retention rates in the world; the school feeding program 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, 2006).

Adelman, Gilligan and Lehrer (2008) show how three aspects of nutrition can influence retention in schools. First, schools meals alleviate short term hunger of school children during the school day, by providing more nutrients to the child, giving the child a meal when he or she would have not otherwise have had one, or replacing a meal that would have been received after school with one during school hours. This aspect of nutrition targets for short term impact and enables a child concentrate and learns more. A study of the effects of school breakfast in rural Jamaica show that overcoming school hours hunger leads to better concentration and learning (Powell, Walker et al. 1998, as quoted in Ahmed, 2004). Second, school meals may also generate nutritional improvements for a
child over long run. The improved nutritional status as a result of school meals will in turn enhance a child’s physiological capacity for learning thereby increasing the benefits of schooling and the child’s desire to attend school. Third, school meals can also reduce morbidity through improved nutrition and consequently enhance both retention and attendance. Morbidity is a cause of absence in many developing countries and school meals help children overcome this problem and learn longer. In this regard school feeding increases micronutrients intake and hence will strengthen children’s immunity and avoid infectious diseases among children (Scrimshaw and San Giovanni 1997 cited on Adelmanet al., 2008).

According to Bundy (2009) reviews carried out in selected international schools yielded mixed results on enrolments. Bundy (2009) further purports that SFP do not always achieve the same effect due to factors like modality of SFP, gender of beneficiaries and types of food provided. School feeding programmes were started in Kenya in 1967. Kenya was first supported to start and implement SFP by (WFP, 1981). Their main objective was to support children from ESAL areas with food to minimize hunger and hence retain them in class. During the study, the researcher found out whether or not SFP’s helped in maintaining children in pre-school in Kabare zone.

This study further sought to find out to what extent school feeding programmes could influence preschool children’s learning performance and a research conducted by Pollit (2001) in Latin America and the Caribbean revealed, there was a three-way relationship between health, nutrition and psychological development of a child, which also
influences their concentration and ultimately school performance. A child who is sick or hungry is less active and doesn’t interact well with the environment around him/her (Werner 1982). Mitchell (1983) also argues that eating is a crucial part of every person’s life. It is well known as Gagne (1977) argues that nutritional problems interfere with learning since it reduces the degree of concentration. School feeding helps to alleviate this problem and hence helps to increase participation, capacity and good learning performance.

Pollit (2001) argues that hunger at school is very common and it interferes with learning process. Many children go to school on an empty stomach and sometimes miss lunch. This leads to poor performance in class. Attention have thus been focused on school feeding role in maximizing children’s learning capacity through the relief of short term hunger, where young children are helped to concentrate and assimilate. A study conducted by the international food policy Research Institute (IFPRI) in 2003 found out that school feeding improved academic achievement. A nutritional survey of 2007 by WFP found that children in schools with feeding programmes are five times more likely not to suffer from anemia than the ones who are in schools without it. Therefore, SFPS help to prevent hunger, which will enable the pre-scholars children to participate in class, and hence improve performance. The study on school feeding programme in Kabare zone sought to find out in depth whether hunger affects class participation and performance.

In 2013, a study was undertaken by FAO in eight of the participating countries (Latin America) with a population of eighteen million students of varying ages. They discovered that the SFP reduced the risk of children dropping out of school and that they increase
learning and address the issue of poor school performance due to hunger. In Brazil, the SFP was supported by FAO which is engaged in a number of activities aimed at helping them to achieve various millennium development goals. Brazil’s great experience with SFPs has a 50 year history. By 2012, its national feeding program reached nearly 45 Million pupils. According to Hutchinson et al (2006), in developing countries SFP aims to increase school attendance, enrolment and encourage children stay in school longer. SFPs positively impact educational attainment by increasing enrolment attendance and reducing absenteeism.

SFPS can have a positive effect on rates of enrolment and attendance. A pilot school feeding programs in Malawi was evaluated for its effect on enrolment and attendance over a three month period and there was a 5% increase in children enrolment and up to 36% improvement in attendance as compared to control schools over the same period (WFP, 1996). Niger has one of the five lowest school enrolment rates in the world. As an incentive for girl’s attendance in schools, some families receive an additional take-home ration. Whenever canteens have been closed, high absenteeism follows and most children are withdrawn from school. In some areas with nomadic populations the school year cannot commence until food stocks arrive (WFP, 1995, 1996).This study sought to find out whether SFPS reduces the absenteeism of pupils in Kabare zone Kirinyaga County.

Food programmes helps towards achieving several millennium development goals (MDGs). The programmes aims at reducing hunger by half, achieving universal primary education by 2015, and of achieving gender parity in education by 2005 (sessional paper,
School feeding programmes helps in reducing poverty and disease. It provides a platform for addressing child health and also nutrition especially through de-worming schemes.

The national school feeding programme in Kenya was founded in 1967. It was supposed to mainly use locally produced foods from the national cereals and produce board. However, this programme alone could not meet the demands for feeding programmes in the whole country. In the process, the Kenyan government encouraged development partners to join in and assist. The WFP is among the many development partners who have been supporting US (Republic of Kenya and UNICEF, 1994). In 1981, WFP and the GOK started a school feeding programme together. Its main objective was to help Kenya achieve universal primary education (UPE) in the ASAL areas. The immediate objectives were to maintain regular attendance rates in the schools, increase enrolment in pre-primary schools. Levinger (1989) says that SFPS make a difference in enrolment and attendance of children to school. The school feeding programme helps poor families by providing their children with a good meal each day and hence saving family food. The focus is on school feedings role in maximizing children’s learning capacity through the relief of short-term hunger, and thus improving pupils’ performance.

The daily meal mixed with milk and salt will provide the children with enough calories, proteins and fat necessary programme was started with the aim of reducing hunger, malnutrition, increasing school enrolment, boosting domestic food production. Due to these programmes, school attendances has increased and improved performance. School
feeding transforms schools into potential centres for addressing a range of children’s needs. The school feeding programme has the strongest impact on education and also in solving social vulnerability (WFP, 2008). The study sought to find out if parents in Kabare Zone understand the importance of providing their children with a balanced diet and its effects on their health and class performance.

SFPS are one of several interventions that can address nutrition and health problems of pre-school children. The SFPs can also be used to motivate parents to enroll their young children in school and to make sure that they attend regularly. According to Bowlby (1988), food quantity and quality should be considered. Children should be given right nutrients to enhance their growth, mental development so that their class performance can improve. Providing children with proper nutrition promotes stimulation of a child’s senses and enhance the development and organization of the brain. Food is a basic need and a right for survival for all humanity especially children who are supposed to enjoy highest attainable standard of health, nutrition and good performance, CRC (1989). WFP sometimes uses fortified food in order to ensure that children receive the nutrients they deserve. Various studies show that good nutrition play a major part in physical and intellectual development in young children. This study sought to establish whether children in Kabare zone are provided with food with proper nutrients.

Oyugi (2007) in her study noted that feeding programmes in pre-schools have given the participation of children direct benefits. At the same time parents, teachers, and stakeholders have acquired better knowledge and skills on issues related to health,
nutrition and also good care of the children. The people who care for the pre-primary school children should, therefore, ensure that the food given to them is well balanced. The current study sought to find out whether well fed pre-primary school children in Kabare zone concentrated in their class work. Pollit (1984) says that malnutrition has become the highest risk factor for the educational future of the children. The Kenyan Government should dedicate its efforts towards improving the health of its people by putting more emphasis on education and eradicating poverty and disease. The children in pre-school are losing part of the most important period of education due to poor health as a result of poor diet. 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. Hunger has adverse effects on cognition problem solving and concentration due to the fact that hungry children are less alert and Lethargic (UNESCO 1990). The current study sought to find out whether there could be a link between lack of school feeding program and children’s low performance in pre-schools in Kabare zone.

2.5 Ways to Alleviate Hunger in Schools

Several studies have shown how stakeholders perform various functions which help in the facilitation of SFP. Kearney (2008) notes that school feeding must take place with the context of broad national school reforms. These reforms should also focus on other basic inputs to education and learning. Although SFP relieve the burden on governments and education ministries in undeveloped countries like Nigeria, Bangladesh, Malawi and Kenya, national; ministries of education of such countries should not take SFP at the expense of educational inputs.
Many governments and education ministries in developing countries are struggling to manage functioning education systems and may not be equipped financially to deal with issues of food distribution as (Bundy & World Bank, 2011) reveals. This implies that providing SFP remains a challenge in most schools including pre-schools where children are in a critical stage of growth and development. The current study sought to explore strategies on enhancing school feeding programs for children at pre-school level in Kabare Zone in Kirinyaga County, Kenya. According to Robert (2011) high poverty levels have hindered children from participation in school. Parents can involve in children’s education by raising funds to purchase foods, preparing kitchen gardens as well as preparing and cooking meals. Lack of participation among parents is attributed to such factors as lack of knowledge, finances and motivation.

According to Tailor (2010), local stakeholders with the help of WFP focus on complementary health and nutrition to overcome reliance on outside food sources which has remained a big challenge due to inadequate funds. Other complementary interventions provided are micronutrient supplementation and e-worming although not all children receive these services. Furthermore, they assure sustainability by working through community since most governments do not have financial resources to sustain feeding programmes as (World Food Programme, 2006) reveals.

In Syria, despite the recent conflicts and terrorist attacks which worsened the humanitarian situations, WFP has focused on delivering food to people affected by conflict and children who are malnourished, pregnant women and nursing mothers have
been provided with emergency food assistance that focus on relief and recovery, school feeding programmes and nutrition (Thirlway, 2014). In Nigeria, Chad and Cameroon malnutrition rates are high and security and instability factors have hindered access for the WFP. Despite these issues, WFP has struggled to offer food assistance to affected people including the pre-schoolds.

Parents should be encouraged to start small kitchen gardens in their schools and other various income generating activities. The county government and other development partners in the county should be encouraged to support school feeding programmes. Much research have been conducted on the influence of short-term hunger related to learning capacity and in-school meals (SFP’s) provided the children to reduce hunger (WFP 2004). Learning, class attendance and children retention is affected greatly by hunger due to lack of meals. Hunger is contributed by many factors among pre-school children. Some of these factors include poverty; long distances covered by school children to reach school, cultural practices that include no breakfast and also parents ignorance on the importance of good feeding in the morning.

Long distances mean the child starts the school ay hungry and therefore cannot concentrate and participate in class. This might lead to low enrolment, poor retention and low participation of pupils in class. The provision of even a small snack or a cup of “uji” at the start of the day or during day time alleviates the short term hunger and increases learning capacity (Briggs, 2008). The school feeding programs helps to improve nutritional status of pre-school children and they participate better in class if not hungry (King & Burgess, 1995). Majority of the poorly fed pre-school children who are provided
with a meal in school can improve their physical growth, class performance and prevent other nutritional deficiencies.

School feeding programmes when designed with micro nutrients in mind, can greatly improve the children’s micronutrient status and improve their class attendance, retention and participation. This is known as hidden hunger due the fact that the effects are not always visible (Briggs, 2008). To alleviate this type of hunger the designers of the school feeding programmes must make sure that the diet contains the three main micronutrient for example irons, Vitamin A and also Iodine. All these three micronutrients are linked to mental and learning capacity. The attendance of children with reduced hunger due to school feeding programmes leading to improved learning performance (Del ROSSO, 1999). During the study, efforts were made to find out whether or not; the learning performance of children in preschools with SFP’s and those without is similar or different.

In line with the 2010 Kenya constitution, the government devolved certain functions to the County level which led to major reforms in the governance, infrastructure, disaster management, emergency preparedness and response (MoDP, 2015). As a result WFP is expected to transfer capacities for improved preparedness and response to the county. It should also provide nutritionally enhanced school meals in marginal areas where national capacities remain unlimited, enrolment and attendance disparities are at peak, food insecurity as well as high malnutrition (County Programme, 2014). Despite the effort by
the government to implement the new constitution, the response to food insecurity remains in question.

As provided in 2015/2016 budget, the government emphasized its commitment to improve food security by modernizing and investing concerning schools. Henceforth, 5.6 billion was set aside to cater for food insecurity and 2.6 billion for SFP (MoDP, 2015). Despite the allocation of funds, there are claims that no monies have been dispatched to be put into use. In Early Childhood Education, only half of public pre-schools benefit from SFP, though not fully yet such programmes are necessary to boost enrolment and retention in school as (Murungi, 2012) notes. There was therefore need to explore strategies on enhancing school feeding programs for children in Kabare Zone in Kirinyaga Zone, Kenya.

2.6 Summary of the Reviewed Literature

According to WFP, food attracts children to enroll/attend school but most importantly, it improves their comprehension or grasp and retention of learning content. Furthermore, a study conducted by International Food Policy Research Institute (IFPRI) in 2003 shows that school feeding programme improves academic achievement in school.

However, it was not known whether or not, this scenario existed in Kabare, where many children were reported to have dropped out of school. There was therefore need to find out whether this phenomena was attributed to absence of pre-school feeding programmes and specifically if it influenced enrolment, and learning performance.
CHAPTER THREE
RESEARCH DESIGNS AND METHODOLOGY

3.0 Introduction

This chapter discusses research methodology. It focuses on research or study design, target population, sample and sampling procedure, research instruments, validity and reliability of the instruments data collection and data analysis procedures.

3.1 Research Design

The study employed a descriptive research design using the survey method. The survey method is the most suited for gathering descriptive information. There are different types of surveying methods for example; unstructured and structured. Unstructured survey method allows the interviewer to probe respondents and guide the interview according to the answers. On the other hand, structured survey uses formal list of questions asked of all respondents in the same way. Both structured and unstructured survey methods were used because it can be used to collect many different kinds of information. It is also quick and low cost as compared to observation and experimental method.

3.2 Variables of the Study

This study had both the independent and dependent variables.
3.2.1 Independent Variables

The independent variables were pre-school feeding programmes or plans on food provision whose availability or non-availability influenced children’s enrolment, attendance and retention of learning content.

3.2.2 Dependent Variables

The dependent variables were pre-school children’s performance in terms of: enrollment/attendance and extent to which they showed comprehension and retention of learning content based on the Kenya Institute of Curriculum Development. Measurement of the specified dependent variables was done as follows:

- **Enrollment:**
  Data on enrollment of pre-school children was obtained from admission records in the pre-school’s administration office. The researcher compared enrollments of children where school feeding programme exists/do not exist and form a ratio. Finally, the researcher made a conclusion.

- **Attendance:** Data relating to children attending well or not in pre-schools was obtained from class registers in the selected pre-schools. The researcher then compared the pupils’ attendance before the introduction of SFP and after its introduction. The comparison was also made between the schools with SFPs and those without and finally interpreted the ratio.

- **Comprehension/Retention of Learning Content:** Learning performance of children in terms of comprehension and retention of learning content by comparing those from
schools with SFP’s and the one’s without was carried out and conclusions made based on frequencies obtained.

3.3 Study Locale
This study was carried out in Kabare Zone in Kirinyaga County, Kenya. The location was purposively chosen because it had a high population with an extensive and diverse catchment area compared to other zones in the county. In addition, many children did not attend school MOE (2008) and it would be important to find out whether or not there might be a link between the current situation of children’s lowered performance in school attendance and lack of school feeding programmes.

3.4 Target Population
The target population included all the 26 pre-primary schools in Kabare Zone of Kirinyaga County, 40 teachers and 881 parents of pre-school children.

3.4.1 Baseline Study
Prior to sampling, the researcher conducted a baseline study in order to establish how many of the 26 pre-schools had or had no SFP’s. This exercise revealed the following as table 3.1 indicates.
Table 3.1: Target Preschools with and without SFP’s

<table>
<thead>
<tr>
<th>Presence of feeding program</th>
<th>Total No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-schools with SFP’s</td>
<td>16</td>
</tr>
<tr>
<td>Pre-schools without SFP’s</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26</strong></td>
</tr>
</tbody>
</table>

As table 3.1 shows, a total of 16 pre-schools had SFP while the remaining number did not.

3.5 Sampling Techniques and Sample Size

Section 3.5 describes the procedure used to select or come up with the sample size.

3.5.1 Sampling Techniques

Purposive, as well as simple random sampling procedures were used to come up with the sample that was used during the study as Orodho and Kombo(2002) advice. Specifically, Kabare Zone in Kirinyaga County and all the 26 pre-schools, teachers and parents of pre-school children in the area were purposively chosen (see 3.1 for justification of consideration of the study locale). Thereafter, the preschools as well as their teachers and parents were stratified into those from schools with or without SFP’s then random sampling of each by rotary ensued in order to eliminate bias, thus ending up with the required 8 (30%) study sample of pre-schools, 16 (40%) teachers or two per school and 264 (30%) parents out of 881 or 33 per pre-school.
3.5.1 Sample Size

Table 3.2 presents the sample size used for the study.

Table 3.2: Sample Frame

<table>
<thead>
<tr>
<th>Category</th>
<th>Target</th>
<th>Sample size</th>
<th>% sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre- Schools</td>
<td>26</td>
<td>8</td>
<td>30%</td>
</tr>
<tr>
<td>Teachers</td>
<td>40</td>
<td>16</td>
<td>40%</td>
</tr>
<tr>
<td>Parents/Guardians</td>
<td>881</td>
<td>264</td>
<td>30%</td>
</tr>
</tbody>
</table>

Eight (8) 30% out of the 26 pre-schools (four with SFP and the other four without) were sampled. Similarly, 16 (40%) or two teachers per school out of the 40 teachers targeted and 30% of parents from the total 881 which translated to 264 formed the sample size of study participants (see Table 3.2). Mugenda and Mugenda (1999) pointed out that 30% sample of the total study target is adequate in descriptive studies such as this one.

3.6 Research Instruments

The study utilized three different research instruments to collect data, namely: an observation guide, interview guide for teachers and questionnaires for parents. The three research instruments are hereby described.

3.6.1 Observation Guide

The observation guide was used to gather own direct data regarding feeding programmes without the researcher asking for information from the respondents. He observed the types of meals offered, quality and quantity of food served. School documents including
school admission registers, class attendance register and assessment tests were scrutinized to note the rate of enrolment, attendance as well as performance. This method was preferred because it yielded important information which respondents might have been unwilling or unable to provide.

3.6.2 Interview Guide for Teachers

The interview guide for teachers helped to find out whether or not, children in preschools sampled were provided with lunch. It also sought to find out whether or not school feeding programmes helped in improving children’s enrolment in preschool, their attendance and retention. It equally sought to establish whether there was any difference in the learning performance of children who were either provided with food in school or not. The tool was found to be useful because the researcher was able to probe for answers and elicit relevant information that was required.

3.6.3 Questionnaires for Parents

Important information regarding school feeding programme was solicited from parents. They were expected to read the questions, interpret what was expected and then write down the responses themselves. The researcher used both closed and open ended questionnaires. Closed ended questions used included all possible answers/pre-written response categories and respondents were asked to choose among them. Open-ended questions allowed respondents to answer in their own words. All the questions were kept short and simple to avoid asking two questions in one. Questionnaire was appropriate for use because it enabled the researcher to reach a large group of parents within a short time.
It was also convenient for use because they were not compelled in any way to state anything contrary to their conviction. Observations were conducted to find out whether or not SFP affected children’s enrolment, attendance, retention and their learning performance.

3.7 Piloting

A pilot study was conducted in four (4) pre-schools, 2 with a feeding programme and the other two without in a period of one week. The purpose for piloting was to check for clarity and relevance of the research tools so that any necessary amendments could be done if necessary in preparation of the main study. These four schools were not included in the final study to guard against respondents becoming too familiar with the study questions.

3.7.1 Validity

Content validity was utilized to establish the degree to which the data gathering instruments were truly well constructed to measure what they were intended to. This was done by ensuring that the research questions were strictly based on the study objectives. The researcher also presented the instruments to the supervisor for analysis and their validity was confirmed. This helped to come up with good reliable instruments to ensure credibility of the results.
3.7.2 Reliability

To test reliability, the split half technique was used as Mugenda and Mugenda (1999) show. This involved splitting the questionnaire items into two equal halves and then correlating the results of each item using spearman’s rank correlation test. An overall correlation coefficient of 0.7 was obtained and accepted to be reliable as Mugenda & Mugenda (1999) point out.

3.7.3 Data Collection

The researcher visited the pre-schools during the learning session and conducted observations in order to establish presence or absence of feeding programme and whether or not it affected children’s enrolment, attendance, retention and their learning performance. Interview guides were also conducted with teachers and questionnaires delivered to the parents through the teacher respondents within a time limit of two weeks. After this period the questionnaires were collected and kept safely to await analysis.

3.8 Data Analysis

The information given by each respondent was put together and recorded down for interpretation and analysis. They involved both qualitative and quantitative aspects. Qualitative data analysis involved going through the content of the interviews and questionnaires first in order to identify the main things that emerged from the responses given by the respondents in different steps as follows:

Identifying the main themes in qualitative data and assigning codes to the main themes, classifying responses under the main themes and finally interpreting the themes and
responses in the text of the report. Quantitative data obtained was analyzed using frequencies, percentages and means. Tables, graphs and pie charts helped in summarizing and describing variable states relating to the quality and quantity of meals offered in schools.

3.9 Logistical and Ethical Considerations

The following are the logistical and ethical issues that were put into consideration during the study:

3.9.1 Logistical Considerations

The researcher sought for clearance from the Graduate School of Kenyatta University, to go and collect data. After this, the researcher sought research permit from the National Commission for Science, Technology and Innovation (NACOSTI), in order to be cleared to collect data from the study participants. Permission to visit the schools was also sought from the head teachers of participating schools.

3.9.2 Ethical Considerations

Ethics pertaining to participants’ right to privacy and confidentiality were also ensured. In addition, their consent to participate in the research was also sought prior to the study. Permission to conduct the research was obtained from the relevant authority. The participants were informed that they were free to withdraw from the research at any time without penalty. Last and not least, the researcher avoided unethical questions such as family income or marital status.
CHAPTER FOUR

PRESENTATIONS OF FINDINGS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter consists of data findings, analysis, presentation and interpretation. This study aimed at finding out the impact of feeding programmes on children’s selected performance parameters: enrollment, attendance, retention learning in pre-schools in Kabare Zone, Kirinyaga County in Kenya. Descriptive research design was used to help achieve the research objectives where data collected was analyzed using frequencies, means and percentages to interpret the findings. For easier analysis and interpretation, the chapter is divided into two sections: Section one presents demographic information and section two presents data as per the study objectives which were:

i. To confirm the number of pre-schools with/ without SFP’s in Kabare Zone Kirinyaga County.

ii. To establish whether the types of meals provided in pre-schools in Kabare Zones, Kirinyaga County were well balanced or not.

iii. To determine the extent to which pre-school feeding programmes influenced children’s enrolment rate in pre-schools in Kabare Zone.

iv. To establish the extent to which pre-school feeding programmes influenced children’s daily attendance.

v. To find out the extent to which school feeding programmes contributed to children’s comprehension/ retention of learning content in pre-schools in Kabare zone.

vi. To explore strategies of enhancing school feeding programs for children.
4.2 Questionnaire Return Rate

Questionnaire return rate which is the proportion of the sample that participated as intended in all the research procedures was established. Specifically, out of 12 teachers and 267 parents sampled, 12 teachers (100%) and 150 parents (56.2%) returned their questionnaires. These percentages return rates were deemed sufficient for the study as Mugenda and Mugenda (2008) recommends a response rate of 50% and above.

4.3 Demographic Information of Teachers and Parents

In this section the researcher analyzed the demographic information of both teachers and parents. Results relating to teachers’ demographic information are presented first in section 4.3.1 followed by those of parents in section 4.3.2.

4.3.1 Teachers’ Demographic Information

The background information of participating teachers involved age, gender and teaching qualifications.

- **Distribution of Teachers by Age**

Teachers were asked to indicate their age. The results are presented in Figure 4.1.
Figure 4.1: Age Brackets of Pre-School Teachers

As shown in Figure 4.1, the researcher found that majority 8(66.7%) of the teachers were aged between 31-40 years. Three (25%) of the respondents were aged between 23-34 years and only 1(8.3%) was aged above 40 years. The findings reveal that all teacher respondents were mature adults which implied that they had good knowledge on the importance of feeding young children on a balanced diet. The next task sought to know the gender of participating teachers.

- Distribution of Teachers by Gender

Teachers were asked to indicate their gender. The results are presented in Figure 4.2.
The study established that majority of the teacher respondents 9(75%) were males. The results also show that 3(25%) of the teachers were female. This implies that teachers were not evenly distributed in most pre-schools based on gender. The researcher observed that male teachers responded more freely to questions as compared to female teachers. The female teachers did not respond well maybe due to shyness or lack of interest. The last task with regard to teachers’ demographic information was teachers’ academic credentials described in the next section.

- **Distribution of Teachers by Level of Training**

Level of training was considered significant factor to the flow of pupils and general performance in pre-schools. Table 4.1 presents the qualification of teachers in Pre-Schools.

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untrained</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>P1</td>
<td>8</td>
<td>50</td>
</tr>
<tr>
<td>Diploma</td>
<td>2</td>
<td>12.5</td>
</tr>
<tr>
<td>Graduate</td>
<td>2</td>
<td>12.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The study findings in Table 4.1 showed that majority of teacher respondents 8(50%) had P1 education, 2(12.5%) had diploma and 2 (12.5%) was a graduate. However, 4(25%) of the pre-school teachers had no training. The results of the study mean that only a few
teachers had pursued higher education which may be attributed to lack of opportunities for pursuing higher learning. It was further observed that teachers who were trained were aware of the importance of school feeding programmes and its impact on children’s class attendance, retention, enrollment and good performance.

4.3.2 Demographic Information of Parents

The demographic or background information of parent participants sought during the study was gender, marital status and socio-economic status. The results are presented in Tables 4.2 to 4.4 beginning with gender of parents.

**Parents’ Gender**

The researcher wanted to find out the gender or marital status of respondents.

Table 4.2: Number of Parents by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>70</td>
<td>26.2</td>
</tr>
<tr>
<td>Female</td>
<td>194</td>
<td>73.8</td>
</tr>
<tr>
<td>Total</td>
<td>264</td>
<td>100</td>
</tr>
</tbody>
</table>

From the findings, 194(73.8%) of all respondent parents were female while 70(26.2%) were male respondents and therefore, the majority were female. Further findings revealed that out of all respondent parents, 98 were married, while 166 were single women parents. 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, majority of parents 182(69%) of the parents reported that their children took lunch in school while 82(31%) said that their children carried their food to school.

- **Parents’ Socio-economic Status**

The study also established the socio-economic status of parents as Table 4.3 shows.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal Employment</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>Business</td>
<td>30</td>
<td>11</td>
</tr>
<tr>
<td>Casual employment</td>
<td>130</td>
<td>50</td>
</tr>
<tr>
<td>Peasant farmer</td>
<td>90</td>
<td>34</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>264</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

As Table 4.3 shows, it was observed that majority of the parents respondents were on casual employment constituting 50%. The study findings therefore reveals that the representative sample majorly comprised parents from low socio-economic background most of who could be the single mothers or casual laborers with no source of steady income. Such a group of people do not comprehend the value of feeding their children with a balanced diet due to poverty and illiteracy. Most of the parents in such caliber also send their children to school without any food which again points to their dire status with regard to socio-economic ability as UNESCO (2010) shows. With demographic information concluded, the researcher moved on to find out the kind of food or meal that was availed to children in school as per the next section.
4.4 Presence of Feeding Programs in Pre-Schools

The first objective of the study sought to confirm the availability of feeding programmes in pre-schools sampled in Kabare Zone, Kirinyaga County. The researcher first conducted a baseline study to establish how many of the 26 preschools sampled had feeding programmes or not as per table 3.3. Thereafter, the researcher randomly selected 16 (40%) pre-schools, 8 of which had feeding programmes and another 8 that did not, for the purposes of fair comparison. The 8 teachers from each category were then asked to confirm whether or not their pre-school had a school feeding programme to which they did and the findings are presented in Table 4.3.

Table 4.3 Availability of School Feeding Programme as Reported by Teachers

<table>
<thead>
<tr>
<th>Presence of SFP’s in Pre-schools</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 4.3 indicates that 50% (4) teachers had school feeding programmes while the other half did not. The schools without SFP’s were from a locale with parents’ low socio-economic status. The socio-economic status of a parent may determine whether or not family needs including financing of SFP’s are met. Low socio-economic status of parents has been described by UNESCO (2010) as a hindrance to parents; ability to provide basic needs for their children. Becker and Tomes (1976) concur that one’s income has the potential to determine the quality of their children’s life either positively or negatively.
Thus poor parents may not be able to provide or support School Feeding Programme which may interfere with learning performance as Pollit (2001) affirms.

### 4.5 Types of Meals Offered in Pre-Schools

The second study objective was to find out the types of meals provided in pre-schools in Kabare Zone, Kirinyaga County. This was done by observing the meals provided at break time and lunch time in pre-schools in Kabare zone, Kirinyaga County.

- **Meals Provided**

  The researcher observed the type of meals served to children for a period of 5 days in a week as per their feeding programme timetable (see Table 4.4).

<table>
<thead>
<tr>
<th>Days</th>
<th>Vegetables with ugali</th>
<th>Rice and Beans</th>
<th>Porridge</th>
<th>Githeri</th>
<th>Total Frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>2</td>
<td>-</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Totals</td>
<td>9</td>
<td>7</td>
<td>3</td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.4 shows the frequency of meals offered in pre-schools for a period of 5 days. The results reveal that the meal that was provided the most was a mixture of maize and beans (Githeri) while the meal that was provided the least was porridge. Further the results
indicate that some schools skipped meals as evidenced from the frequencies obtained. It was further observed that even though most pre-schools provided different types of meals during lunch, it was not well balanced. Skipping meals could hinder enrolment and school attendance as Bundy (2004) revealed in his study.

From the food roster, it was observed that some schools did not alternate meals, for instance, Githeri could be cooked in two consecutive days which was not commendable for young children who require a variety of meals Bundy (2004) as key to absolute nutrient adequacy. During the study, some of the parents disagreed that their children received a balanced diet every day. In a statement recorded by a single mother with two children in pre-schools explained that,

“...my kids do could repeat the same meal consumed in the previous night for breakfast”.

In agreement with these sentiments, School Feeding Programmes (SFP) as Bundy (2009) reveals, do not always achieve positive effects due to such factors as availability and type of foods served. In order to accomplish positive effects of SFP, there was therefore need to ensure that children were not only fed but that there was provision of variety of food and without skipping meals in all pre-schools. The researcher also wanted to find out whether teachers and parents in particular knew the importance of balanced food with regard to young children.

From the food types listed, all teachers who participated in the study appeared to know the importance of balanced diet to children. However, amongst the parents, a number of
them seemed not to know what balanced diet entailed and its importance to children’s brain development.

- **Adequacy of Food Served**

The adequacy of food served or carried by children was ascertained by the teachers, parents and the researcher through observation. The food was served by the cooks who were supervised by the teachers or by teachers themselves. The researcher however observed that the quantity of food availed to children was too little.

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. 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.

These findings show that the quality of meals provided in schools was considerately low monotonous in type where one meal could be taken two or three times in a week and also inadequate in quantity in most schools. Children require adequate, varied and balanced food (Apond, 2014) but most importantly, it should also be consistently availed. Further, children are particularly vulnerable to short-term hunger where diets of poor quality are consumed, as World Feeding Programme (2006) reveals
4.6 Influence of SFP’s on Different Performance Parameters in Preschool Children

The study sought to find out to what extent School Feeding Programmes influenced preschool children’s performance in selected parameters starting with enrolment, attendance, retention rates and progress in learning activities.

4.6.1 Pre-School Children’s Enrolment

The third objective of the study sought to determine the influence of pre-school feeding programmes with regard to the performance of children in the area of enrolment in preschools in Kabare Zone of Kirinyaga County. To establish the findings for this objective the researcher analyzed admission or enrolment books—Table 4.5 and 4.6 present the results for this objective.

Table 4.5 Numbers of Children Enrolled in Pre-Schools with/without SFP; 2013-2016

<table>
<thead>
<tr>
<th>PRE-SCHOOLS WITH SFP</th>
<th>Schools</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>I</td>
<td>32</td>
<td>34</td>
<td>39</td>
<td>23</td>
</tr>
<tr>
<td>J</td>
<td>J</td>
<td>30</td>
<td>31</td>
<td>36</td>
<td>29</td>
</tr>
<tr>
<td>K</td>
<td>K</td>
<td>24</td>
<td>26</td>
<td>24</td>
<td>28</td>
</tr>
<tr>
<td>L</td>
<td>L</td>
<td>36</td>
<td>38</td>
<td>46</td>
<td>52</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>Totals</strong></td>
<td><strong>122</strong></td>
<td><strong>129</strong></td>
<td><strong>145</strong></td>
<td><strong>132</strong></td>
</tr>
</tbody>
</table>

| PRE-SCHOOLS WITHOUT SFP | M       | 30   | 30   | 25   | 20   |
|                         | N       | 30   | 28   | 20   | 16   |
|                         | O       | 21   | 20   | 18   | 14   |
|                         | P       | 38   | 35   | 30   | 22   |
| **Total**              | **Total** | **119** | **113** | **93** | **72** |
From Table 4.5 the number of children enrolled in the schools was high in the 2016, followed by the year 2015. The year 2013 recorded an enrolment relatively lower than in 2014. This implies that there was gradual but steady increase in enrolment in pre-schools with feeding programmes. The enrollment in pre-schools without SFP registered a decrease as from year 2013-2016.

It was further revealed that there was improvement in learning performance where food was provided which implies that the upward move could be due to availability of feeding programme. Schools without feeding programme recorded a poor performance from 2013 to 2016 indicating there was no improvement. The level of enrolment in pre-schools was further rated based on availability or non-availability of feeding programmes. The results are presented in Table 4.6.

**Table 4.6 Rate of Enrolment in Pre-schools with/ without SFP**

<table>
<thead>
<tr>
<th>Level of enrolment</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>6</td>
<td>85.7</td>
</tr>
<tr>
<td>Poor</td>
<td>1</td>
<td>7.15</td>
</tr>
<tr>
<td>Poor</td>
<td>1</td>
<td>7.15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 4.6 presents results on level of enrolment in schools as observed in the enrolment books. The results showed that enrolment was excellent in 6 (85.7%) schools with SFP, poor in the remaining 2 schools with (7.15%) each which had no SFPs. This implies that provision of feeding programmes in schools enhanced enrolment. These findings are in
agreement with the study findings by Yendaw and Dayour (2015) which demonstrated a very influence of quality and quantity of food prepared in school on the school enrolment. The findings of their study indicated that enrolment before the introduction of the SFP stood at 35.8%, but increased phenomenally to 64.2% after the implementation of the programme.

Similar findings have been reported by Wamaru (2014), who concluded that SFP enhance enrolment to a greater extent. Ouko (2012) also revealed that enrolment trends increased with the introduction of SFP in schools. According to Lawson (2012), there is consistent positive effects of SFP on energy intake, micronutrient status and school enrolment of children participating in SFP compared to non-participants. From a study carried out by Gilligan in 2009 in Bangladesh, SFP increased enrolment by 14%. A similar study that was carried out by WFP in 2010, in the same place indicated that the enrolment had risen to 20%. From a study carried out by Gilligan in 2009 in Bangladesh, SFP increased enrolment by 14%. A similar study that was carried out by WFP in 2010, in the same place indicated that the enrolment had risen to 20%.

The findings of this study are also in conformity to Osei-Fuso (2011) who observed that school feeding programmes and other school-based nutrition and health programmes motivate parents to enroll their children in school and to see that they attend school regularly. In a similar observation, a case study by World Food Programme (2010) in Niger documented strong improvements in enrolment when families received food incentives in return for good school attendance (WFP Report, 2010). This report
advocated that school meal has significant positive effect on such indicators as primary completion rates, continuation to secondary and exam scores.

These findings also conform to Lamber (2009) that before the implementation of SFP, the school gross enrollment in rural schools was lowest at 48.8%. However, when the programme began with 234 schools and 30,000 pupils in 2003, the admission rate increased from 50.5% in 2003/4 the first year of the programme to 69.7% in 2008 while the gross rate enrollment also increased from 21.8% to 48.8% over the same period (Lamber, 2009). In support to this finding, Navuri (2011) also revealed SFP increased the enrolment of standard one in primary schools to 8,396,925 in 2007 from 6,562,722 from 2003.

The findings also concur with Gelli (2006) provision of food to 21.7 million children in 32 Sub-Saharan African countries led to a 14% yearly increase in enrolment for both boys and girls. Similarly, the World Food Programme report (2009) also contemplates that 1.2 million children remain out of school. A study by Ahmed (2004) showed that school feeding programmes have statistical significant positive impacts on both gross and net enrollment rates with 14.2% and 9.6% increases respectively.

The findings are also in agreement with Gelli, Meir et al (2007) that providing food in school under the Food for Education (FFE) scheme contributed to increasing absolute enrollment in WFP assisted schools by 28% for girls and 22% for boys in just one year. After the first year of provision of SFP, enrollment pattern showed variation depending
on the type of FFE program, that is, whether the provision of food in school was combined with take home rations or was served alone. In those places where on-site feeding and take home rations were offered together, girls’ absolute enrollment kept on increasing by 30% subsequent to the first year. Meanwhile, schools that provided only on-site feeding have just recorded increase in an absolute enrollment that was same as before the feeding program was implemented.

4.6.2 Children’s School Attendance

The fourth objective of the study sought to determine the influence of pre-school feeding programmes on children’s school performance in terms of attendance. The results have been summarized in Table 4.7.

| Table 4.7 Attendance of children in Pre-Schools with/without SFP; 2013-2016 |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|
| WITH SFP                      | 2013  | 2014  | 2015  | 2016  |
| I                             | 78    | 81    | 80    | 88    |
| J                             | 76    | 80    | 78    | 74    |
| K                             | 78    | 75    | 80    | 81    |
| L                             | 88    | 98    | 95    | 98    |
| TOTALS                        | 320   | 334   | 333   | 341   |
| WITHOUT SFP                   |       |       |       |       |
| M                             | 94    | 92    | 80    | 60    |
| N                             | 87    | 80    | 75    | 60    |
| O                             | 85    | 70    | 60    | 50    |
| P                             | 60    | 40    | 30    | 20    |
| Total                         | 326   | 282   | 245   | 190   |
Table 4.7 above shows the attendance of pre-scholars between the year 2013 and 2016. The findings indicated that there was sharp increase in class attendance among pre-scholars from 2013 to 2016 in schools with SFP (I, J, K, L). This shows that a feeding programme is one of the factors influencing the attendance of the pre-scholars. The study findings further revealed that there was a decrease in class attendance in schools which did not have SFP. The findings of the study agree with Adelman et al., (2008), who observed that school meals can be effective at increasing class attendance because children receive the meal only when they attend school to alleviate short term hunger of school children during the school day by providing more nutrients to the child, providing the child with a meal when he or she would have not otherwise have had one, or replacing a meal that would have been received after school with one during school hours.

Teachers in schools with SFP were further asked to comment on the status of attendance of children in their classes based on the following criteria: 30 and below=poor, 31-50=Fair, 50-60=Good, 71 and above=Excellent, Findings are presented in Table 4.8.

**Table 4.8: Level of Attendance as Reported by Teachers**

<table>
<thead>
<tr>
<th>Level of attendance</th>
<th>No. of schools</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>6</td>
<td>75</td>
</tr>
<tr>
<td>Good</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td>Fair</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Poor</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Table 4.8 above shows that where SFP was provided, school attendance was excellent as reported by 6 (75%) schools. However, the other 1 (12.5%) of the teachers said that attendance was good while 1 (12.5) was poor due to lack of the SFP in school. This implies that SFP played a significant role in enhancing school attendance.

Teachers were further asked to state some of the factors that led to good attendance and poor attendance of children in class. Based on good attendance, majority of teachers explained that children were given enough lunch at home rarely absent themselves in school. One of the teachers further explained,

“…some parents do not take good care of the children and this affects children in learning...failure to give a child enough lunch for those who carry their own lunches usually leads to fights among children especially during lunch time”.

Findings further showed that majority of parents agreed that their children did not attend school regularly. The major reasons given were related to sicknesses and school fees. None of the parents knew how his/her child performed in co-curricular activities, even though all parents were well informed of their children’s progress in schools. These findings implied that lack of parental participation in their children’s education determined the class attendance among children. It is true that a starving child cannot concentrate in class and this leads to cases of framed sicknesses among children in this situation.
Moreover, lack of SFP in some pre-schools which sometimes skipped lunch programmes worsened the situation. Attendance remains moderate in some schools that provided SFP due to inconsistency in provision of meals. When children miss school, it implies that they may not progress to other levels of learning. According to Murungi (2012) feeding programmes is important since it establish firm foundation of education that enable a child to progress to other preceding levels of learning and therefore prepare children for social life. Lack of SFP in pre-schools may lock out children from achieving these benefits.

The findings are in agreement with the findings of the study by Yendaw and Dayour (2015) on the effect of the national school feeding programme on pupils’ enrolment, attendance and retention. Yendaw and Dayour (2015) in their study revealed that while 70.1% of children attend school throughout the week as a result of meals quality and quantity, as much as 63.2% of pupils attend school once a week due to negative perception about the quality and quantity of food prepared in school.

Armed and Del-Ninno 92003) also noted that attendance in schools with School Feeding Programmes (SFP) was 12 points higher than in schools without SFP (70% compared to 58% respectively) in Bangladesh. According to Gilligan (2009) food attracts children to school and reduces hunger while they learn. The programmes have considerably impacted on school participation in terms of attendance (Gilligan, 2009). Vermeerch and Kremer (2004) also add that the average school participation is higher in pre-schools with school feeding programmes than those without. The findings of the study also conform to
the findings of a control study by Vermeerch (2004) which demonstrated that children’s school participation was 30% percent higher among children attending school with SFP.

In agreement to the findings of this study, Jacoby and Cueto (1996, as cited in Adelman, et al., 2008) revealed that a school breakfast increase attendance rates of fourth and fifth-grade students by 0.58 percentage points in the treatment schools whereas it declines in control schools by 2.92 percentage points. The evaluation occurred 30 days after the commencement of the breakfast program and following those 30 days the breakfast program was also implemented in the control schools. Yunusa (2012) noted that students in school feeding programmes have the potential for improving performance because it enabled them attend school regularly and study more effectively.

In support to the findings of the current study, Ranivnder, (2007) found that dropout patterns were linked with poor attendance, beginning in Kindergarten and schools were most effective in accomplishing high attendance rates when parents, school leaders and community members work together to focus on improving the feeding programmes in schools. As well, Duggan, Watkins and Walker (2008) argue that the introduction of universal school breakfast programmes improve rates of attendance and punctuality and decrease rates of psychological symptoms. Ahmed and Nimmo (2002) in their study also showed that SFP increased school attendance by a huge percentage.

The results are in agreement with what Gilligan (2009) found out in a study carried out in Bangladesh that SFP increased school attendance by 6%. Bruhn (2004) attributed poor
cognitive development to malnutrition, children absentee themselves from school or even drop out. In another study by Duggan et al (2008) linked the improved rates of attendance and punctuality to the introduction of universal school breakfast programmes. An evaluation of SFP by Yendaw and Dayour (2015) showed a 36% increase in attendance.

- **Consistency of Children in Attending Pre-School**

The study further sought to find out the influence of school feeding programmes on children’s consistency in attending pre-schools in Kabare zone. Consistency in attendance was observed and analyzed as per the class register. Figure presents the rate of consistency per school.

![Bar Chart: Rate of Retention per School](image)

**Figure 4.3 Rate of Retention per school**

Findings in Figure 4.3 showed that 4(50%) schools had fair retention rate and 3(37.5%) had excellent retention rate. However, 1(12.5%) of the school had poor retention rate due
to lack of SFP. This implied that schools without feeding programmes experienced inconsistent flow of pupils, thus the rate of enrolment did not match the completion rate.

It was further observed that retention was influenced by contextual factors. For instance majority of children from the upper zone were malnourished as compared to the lower zone. The upper zone, which was a tea zone, children mostly relied or fed on rice, ugali and very little vegetables and fruits. In lower zone, food was plenty from shambas and children were healthy as compared to the ones from the upper zone.

These findings also concur with those of Pollit (1984) which revealed that school feeding roll maximizes children’s learning capacity and retains them in school. These children were attracted by the food offered in school to remain in class hence boosting their retention leading to good learning.

The findings of the current study also correspond with those by Yendaw and Dayour (2015) in Ghana which revealed that school retention rates were low with a dropout rate of (73.8%) which was higher among pupils before the introduction of the SFP compared to the period after the introduction of the programme with only 26.2% dropout rate. Yendaw and Dayour (2015) further indicated that the operation of the programme has significantly improved pupil’s retention in school compared to the period before the introduction of the programme. Teachers in schools with SFP were further asked to rate the performance in terms of learning activities among children. Results are presented in the next section.
4.6.4 Performance in Learning

The fifth study objective sought to establish to what extent school feeding programmes influenced children’s comprehension/retention of learning content in pre-schools in Kabare zone. The results are presented in Figure 4.4.

**Figure 4.4 Level of Children’s Performance in Pre-Schools with/without SFP**

Findings in Figure 4.4 indicate that performance of 4(58%) of the schools with SFP was good while schools without SFP, 2(32%) had fair performance while only the other without SFP 2(10%) performed poorly. These findings concur with those of Pollit (1984) which revealed that SFP improves children’s learning capacity. The findings are also in agreement with those of the study by Vermeersch and Kremer (2004) who found in their research that school feeding programme increased participation of children in learning activities in classroom. However, they noted that the SFP did not necessarily result into better performance of pupils in class. Werner (1982) noted that a child who is sick or hungry is less active and does not interact well with the environment around him/her.
School feeding helps to alleviate this problem and hence helps to increase participation, capacity and good learning performance.

In 2013, a study was undertaken by FAO in eight of the participating countries (Latin America) with a population of eighteen million students of varying ages. They discovered that the SFP reduced the risk of children dropping out of school and that they increase learning and address the issue of poor school performance due to hunger. In Brazil, the SFP was supported by FAO which is engaged in a number of activities aimed at helping them to achieve various millennium development goals. Brazil’s great experience with SFP s has a 50 year history. By 2012, its national feeding program reached nearly 45 Million pupils. According to Hutchinson et al (2006), in developing countries SFP aims to increase school attendance, enrolment and encourage children stay in school longer. SFP s positively impact educational attainment by increasing enrolment attendance and reducing absenteeism.

Similarly, the findings are buttressed by Del-Rosso (2013) that school feeding programmes and other school-based nutrition and health programmes motivate children to attend school regularly. This helps to increase the attention and concentration of students producing gains in cognitive function and learning. The World Feeding Programme (2006) affirmed that school canteens were associated with regular attendance, consistently lower repeater rates, lower dropout rates in disadvantaged provinces, and higher success rates on national exams, especially among girls. 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 as (WFP, 2006) revealed.

First, schools meals alleviate short term hunger of school children during the school day, by providing more nutrients to the child, giving the child a meal when he or she would have not otherwise have had one, or replacing a meal that would have been received after school with one during school hours.

The findings are in agreement with Powell, Walker et al. (1998, cited in) that overcoming school hours hunger leads to better concentration and learning. School meals may generate nutritional improvements for a child over long run. The improved nutritional status as a result of school meals will in turn enhance a child’s physiological capacity for learning thereby increasing the benefits of schooling and the child’s desire to attend school. Third, school meals can also reduce morbidity through improved nutrition and consequently enhance both retention and attendance.

In support to the findings of the current study, Bowlby (1988) found that children should be given right nutrients to enhance their growth, mental development so that their class performance can improve. Providing children with proper nutrition promotes stimulation of a child’s senses and enhance the development and organization of the brain. Studies in Kenya also confirmed this significant relationship between feeding programmes and retention. For instance, Oyugi (2007) noted that feeding programmer in pre-school have
given the participation of children direct benefits. Malnutrition has become the highest risk factor for the educational future of the children.

4.7 Strategies of Enhancing School Feeding Programs for Children

The sixth and final objective of the study sought to explore strategies on enhancing school feeding programs for children. The analysis majorly based on qualitative data and presented done using direct quotes. Only data relevant to the topic and the objective has been presented and discussed. Teachers and parents to suggest ways of curbing the challenges related to feeding in schools.

Parents were asked to explain how they could overcome the challenges they faced as far as provision of feeding programmes in school was concerned. One of the parents explained,

“…school stakeholders ought to be sensitized to generate activities that will assist /generate funds for SFPS”

In another statement recorded by a second respondent, a single mother suggested that,

“...we as parents should be included by the school management to contribute money, contribute food, provide storage and purchase food.”

This clearly shows that parents play a key role in providing SFP. They need to contribute money, food, firewood. Parents suggested that in schools where they do not participate in cooking, they should hire cooks and provide storage facilities. They also purchase food, cook and serve pre-school children.
Teachers reported that the community should play a key role in providing SFP by contributing money, fire woods and food. They should also purchase food, provide storage facilities and hire cooks. Teachers added that schools would collaborate with donors and other organizations which could contribute funds for purchasing meals, provide food and storage facilities.

Some parents agreed that there are community level structures like county representatives to establish communication and that there exist a committee that comprise of parents and teachers representatives Failure to consult the community while implementing a programme means that they do not participate in such a programme. There is therefore need to consult the community in order to own SFP.

Teachers agreed that needs assessment should be thoroughly done before SFP commence and that community includes SFP as one of the priorities in their plans. Failure to involve all stakeholders in needs assessment and to consider all issues, problems and opportunities might have led to collapse of SFP Kirinyaga County. Teachers agreed that there is no implementing unit and implementing arrangements for SFP in their schools, Staff are not trained on knowledge of SFP, monitoring and evaluation are done to check whether goals of the programme are achieved and that reports are not produced frequently. However it was proposed that there are procedures for consultation with participants and that consultation process is open and transparent. The failure to considered and implement all policies and regulation governing SFP may lead to collapse of the programme.
According to a report by World Food Programme (2004) parents should be encouraged to start small kitchen gardens in their schools and other various income generating activities. The county government and other development partners in the county should be encouraged to support school feeding programmes. In his study, Briggs (2008) revealed that the school feeding programs helps to improve nutritional status of pre-school children and they participate better in class if not hungry.

The suggested interventions in this study are related to those noted by Kearney (2008) that school feeding must take place with the context of broad national school reforms which henceforth ought to focus on other basic inputs to education and learning. These interventions would eventually relieve the burden on governments and education ministries in undeveloped countries. According to Bundy and World Bank (2011) financial support is the primary tool towards dealing with issues of food distribution, otherwise SFP will still remain a challenge in most schools including pre-schools where children are in a critical stage of growth and development.

Robert (2011) suggested that due to high poverty levels parents should be encouraged to involve in their children’s education through raising funds to purchase foods, preparing kitchen gardens as well as preparing and cooking meals. However, this is based on knowledge, finances and motivation.

World Food Programme (2006) proposed that other complementary interventions that ought to be provided are micronutrient supplementation and e-worming although not all
children receive these services. These should target children who are malnourished, pregnant women and nursing mothers which attempts to enhance emergency food assistance, school feeding programmes and nutrition (Thirlway, 2014).

Parents should be encouraged to start small kitchen gardens in their schools and other various income generating activities. The county government and other development partners in the county should be encouraged to support school feeding programmes. Much research have been conducted on the influence of short-term hunger related to learning capacity and in-school meals (SFP’s) provided the children to reduce hunger (WFP 2004). Learning, class attendance and children retention is affected greatly by hunger due to lack of meals. Hunger is contributed by many factors among pre-school children. Some of these factors include poverty; long distances covered by school children to reach school, cultural practices that include no breakfast and also parents ignorance on the importance of good feeding in the morning.
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 thereafter. The conclusions and recommendations drawn were focused on objectives of the study which were to; to establish the availability of feeding programs in pre-schools in Kabare zone, Kirinyaga County; the types of meals offered, to determine the influence of pre-school feeding programmes on children’s enrolment, attendance and in comprehension/ retention of learning content in pre-schools in Kabare zone; as well as to explore strategies on enhancing school feeding programs for children.

5.2 Summary of Findings
In regard to the status of SFP in pre-schools, the researcher wanted to know if they existed, in pre-schools and was the first study objective. Findings reveal that there were 16 schools with a feeding programme and 10 without. Reviewed literature shows that where there are feeding programmes, children were healthy while in schools with no feeding programmes, their growth and development may be jeopardized.

Objective two of the study sought to find out the types of food offered by the school in order to determine whether or not children’s food was varied. Findings reveal that most of the children were fed on Githeri and the rest with Ugali/ Uji. The food provided was
not adequate and not well balanced. This could be attributed to ignorance and poverty on the side of parents.

The third objective sought to establish the influence of pre-school feeding programmes on children’s school performance in terms of enrolment. Findings show that the enrollment of pre-scholars between the year 2013 and 2016 increased gradually in schools with SFP (I, J, K and L). This was attributed to the availability of the school feeding programmes. On the other hand, schools registered a drop in enrolment due to lack of SFPs.

In objective four, the findings indicate that there was sharp increase in class attendance among pre-scholars from 2013 to 2016 in schools with SFP. This shows that a feeding programme is one of the factors influencing the attendance of the pre-scholars. The study findings further revealed that there was poor class attendance in school which did not have SFP. Findings precisely show that 4(50%) schools had fair consistency and 3(37.5%) had excellent consistency in attendance rates. However, 1(12.5%) of the school had poor retention rate due to lack of SFP implying that schools without feeding programmes experienced inconsistent flow of pupils, thus the rate of enrolment did not match the completion rate.

With regard to objective five which related to influence of school feeding programmes on children’s comprehension/ retention of learning performance content in pre-schools in Kabare zone. Findings show that the pre-schools with SFP performed very well 4(58%)
and 2(32%) performed fairly, while the remaining 2(10%) of schools without SFP posted very poor results. This confirms Pollit (1984) studies which concluded that feeding programmes improves children’s learning capacity. The findings also concur with those of the study carried out by Vermeersh and Kremer 2004) who noted that good feeding increased participation of children in class learning activities.

The last objective sought to explore strategies on enhancing school feeding programs for children. Teachers reported that the community should play a key role in providing SFP by contributing money, fire woods and food. They should also purchase food, provide storage facilities and hire cooks. Teachers added that schools would collaborate with donors and other organizations which could contribute funds for purchasing meals, provide food and storage facilities. Some parents agreed that there are community level structures like county representatives to establish communication and that there exists a committee that comprise of parents and teachers representatives. Teachers agreed that needs assessment should be thoroughly done before SFP commence and that community includes SFP as one of the priorities in their plans. Teachers agreed that there is no implementing unit and implementing arrangements for SFP in their schools, Staff are not trained on knowledge of SFP, monitoring and evaluation are done to check whether goals of the programme are achieved and that reports are not produced frequently.

5.3 Conclusions
The findings revealed that SFP is available in some pre-schools in Kabare zone, Kirinyaga County Kenya even though they are on and off depending on the availability of food.
In pre-schools that provide SFP, same meals are offered more than twice in a week and Githeri is the common meal in most pre-schools. The findings also revealed that SFP enhance school attendance and enrolment. Most pre-schools with SFP recorded high percentage of school attendance and enrolment even though performance remained moderate. This can be attributed to the availability of SFP provided in these schools. School Feeding Programmes attracts or encourages young children to attend and enroll in schools. Parents from poor socio-economic backgrounds also encourage their children to attend schools in exchange for food provided during lunch time. On the other hand, children’s enrolment and attendance is very low due to the unavailability of food in school. Despite high attendance in schools that provide SFP, children miss school. This could be related to other factors such as genetical makeup and the environment. The low attendance and enrolment recorded in most pre-schools might mainly be attributed to lack of SFP. In contrast, high school populations were recorded in pre-school that offered SFP. Interventions for curbing the challenges related to feeding programmes in pre-school were only proposed but were not fully implemented. Concerning the area of community participation, community is not consulted when designing SFP.

Further, the community does not participate fully in paying cooks and contributing food. This study clearly showed that staffs are not trained on knowledge of SFP, monitoring and evaluation of SFP is not done in most schools and that there are no implementing units and implementing arrangements in some schools. It was also noted that most schools lack the capacity to plan and manage budget needs. All these challenges hinder provision of SFP in the area.
5.4 Recommendations of the Study

The following recommendations were made as per the findings and conclusions of the study.

1. The study sought to establish whether SFP were available in schools. However, where SFPs were provided, food was not sufficient in quantity and not well balanced. To ensure consistent provision of SFP, policies that guide the need to make SFP compulsory in pre-schools should be established since it improves children’s enrolment, attendance and performance.

2. Since SFP is a complex programme, all stakeholders led by County governments should join hands to provide SFP to pre-school children. School Managers, Community and Parents of pre-school children should make arrangements in advance to store enough food during harvest season. Parents and community also should be mobilized further to fully support the programme by contributing adequate food, giving out money to purchase food, providing firewood, cooking and serving meals in turn.

3. There is need for school managers to ensure that balanced meals with small portions of all nutrient components are offered in schools. There should be frequent change of the diets to avoid monotony. This will help boost school attendance and enrolment.

4. There is need for parents and county government to work hand in hand to provide SFP in all pre-schools in the sub-county. There is also need for policy makers to ensure policies governing implementation of SFP are followed to the latter. Furthermore all stakeholders should work in harmony to provide SFP.
5. The researcher recommends there be established a committee to check on the recommendations given by the stakeholders on how to sustain the feeding programme. 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. All stakeholders are encouraged to work together for the wellbeing of the programme in these schools. This will ensure continuity of the programme.

5.5 Recommendations for Further Studies

1. In relation to the findings and the conclusion in this study, the researcher recommends that further studies could be done on the impact of school feeding programme on pre-schools children’s mental development.

2. This study focused on one sub-county in Kirinyaga County Kenya, there is need to carry out the same research in other sub-counties in the county to find out if there is difference in findings.

3. The study focused on SFPs and children’s school attendance and enrolment, there is therefore need to carry out the same research but focusing on other variables like socio-emotional behavior and physical development.

4. There is also a need to carry out a research on sustainability of SF’s in order to ensure consistent provision of food to children all the time.
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APPENDICES

APPENDIX A: OBSERVATION GUIDE

School Code No………………………………………………………………………………

1. Availability of pre-school feeding programme
   Yes ☐   No ☐

2. Type of food served / carried to school for lunch.
   Well balanced ☐ moderately balanced ☐ Not Well balanced ☐

3. Quantity of food served or carried by children for lunch.
   Enough ☐ Little ☐ Very Little ☐

4. The rate of pupil’s enrollment as per the class registers
   Excellent ☐ Fair ☐ Poor ☐

5. The rate of pupil’s consistency in attendance as per the class registers
   Excellent ☐ Fair ☐ Poor ☐

6. Comprehension/ retention of learning content.
   Excellent ☐ Fair ☐ Poor ☐
APPENDIX B: INTERVIEW GUIDE FOR TEACHERS

School Code No. ………………………………………………………………………………………………………………………………..

A. Demographic Information

1. Age ……………………………………………………………………………………………………………………………………………
2. Gender………………………………………………………………………………………………………………………………………..

B. Availability of School SFP (Objective 1)

4. Presence of School SFP.
   Yes ☐  No ☐

C. Types of Meals Provided (Objective 2)

5. List down the types of food provided to children daily in your school.
   Monday………………………………………………………………………………………………………………………………………..
   Tuesday………………………………………………………………………………………………………………………………………
   Wednesday………………………………………………………………………………………………………………………………..
   Thursday……………………………………………………………………………………………………………………………………
   Friday……………………………………………………………………………………………………………………………………..

Would you say the meals are adequate for children in terms of quantity?
   Yes ☐  No ☐

6. Are the meals served to children balanced in terms of nutritional value?
   Yes ☐  No ☐

What would you say is the importance of balanced meals to the holistic growth and development of children?
   ……………………………………………………………………………………………………………………………………………………..
   ……………………………………………………………………………………………………………………………………………………..
   ……………………………………………………………………………………………………………………………………………………..
   ……………………………………………………………………………………………………………………………………………………..
D. Enrolment (Objective 3)
6. How many children are enrolled in your pre-school?

E. Attendance (Objective 4)
7. What is the status of attendance of children in your class?
   Excellent □   Good □   Fair □   Poor □

Explain some of the factors that may lead to attendance of children in school.

Good attendance
(a) ………………………………………………………………………………………
(b) ………………………………………………………………………………………
(c) ………………………………………………………………………………………

Poor attendance
(a) ………………………………………………………………………………………
(b) ………………………………………………………………………………………
(c) ………………………………………………………………………………………

F. Comprehension/ Retention of Learning Content (Objective 5)
8. Indicate the comprehension/ retention rate in terms of learning activities among children who are not provided with food in school.
   Excellent □   Good □   Fair □   Poor □

9. Rate the general learning performance of children who are not provided with food in pre-school
   Excellent □   Good □   Fair □   Poor □

If the answer for Q7 is (poor), give reasons.
(a) ………………………………………………………………………………………
(b) ………………………………………………………………………………………
(c) ………………………………………………………………………………………
APPENDIX C: QUESTIONNAIRES FOR PARENTS

A. Parents’ Demographic Information

1. School Code: .................................................................

2. Gender  Male  □  Female  □

3. What is your main source of income? Please tick as appropriate.

<table>
<thead>
<tr>
<th>Source of Income</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal Employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casual employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peasant farmer</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>264</td>
<td>100%</td>
</tr>
</tbody>
</table>

B. Presence of SFP

4. Does your child eats in school or is he/ she provided with lunch in pre-school every day?
   Yes  □  No  □

C. Types of Meals Provided (Objective 2)

5. List down the type of food provided to children daily in pre-school.
   Monday. .................................................................
   Tuesday. ..............................................................
   Wednesday. ...........................................................
   Thursday. .............................................................
   Friday. ...............................................................

Would you say that the meals provided to children are adequate in terms of quantity??
   Yes  □  No  □
6. Is the food provided to children well balanced nutritionally?
   Yes ☐               No ☐

   If the answer to question 5 above is Yes, please explain the importance of balanced diet to children’s brain development?
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………

D. Enrolment
7. How long ago, was your child enrolled into pre-school? Write your response in figures?
   3 months ago ☐       6 months ago ☐       1 year ago ☐

E. Attendance/ Consistency
8. Does your child attend school regularly?
   Yes ☐               No ☐

F. Comprehension/ Retention of Learning Content
9. Indicate to what extent presence of SFP influences the retention rate in terms of learning activities of your children in preschool.
   Very great extent ☐   Great extent ☐   low extent ☐   Very low extent ☐

10. Rate the general learning performance in your child in learning performance
    Excellent ☐    Good ☐    Fair ☐    Poor ☐

    Please explain the reasons for your answer in question (9) above
    ……………………………………………………………………………………………
    ……………………………………………………………………………………………
    ……………………………………………………………………………………………

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Challenges/ Strategies

11. Do you face major challenges as you work towards provision for your children’s feeding?
   
   Yes ☐  No ☐

If the answer for Q11 is yes, explain how you can overcome the challenges you face.

Attendance

12. Does your child attend school regularly?
   
   Yes ☐  No ☐

Please explain the reasons for irregular/ irregular attendance of your child in school.

Comprehension

13. Does your child comprehend the content taught in school?
   
   Yes ☐  No ☐
APPENDIX D: APPROVAL LETTER FROM GRADUATE SCHOOL

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 4150

Internal Memo

FROM: Dean, Graduate School

TO: Newton W. Mbunjie
C/o Early Childhood Studies Dept.

DATE: 15th February, 2017

REF: E55/OL/25148/2011

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

We acknowledge receipt of your revised Research Proposal as per our recommendations raised by the Graduate School Board of 25th January, 2017 entitled "Impact of Feeding Programmes on Pre-school Children’s’ in Selected Performance Parameters in Kirinyaga County, Kenya”.

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking Forms per semester. The form has been developed to replace the Progress Report Forms. The Supervision Tracking Forms are available at the University’s Website under Graduate School webpage downloads.

Thank you.

GIDEON KAIMENYI
FOR: DEAN, GRADUATE SCHOOL

C.c. Chairman, Department of Early Childhood Studies

Supervisors:

1. Dr. Juliet W. Mugo
C/o Department of Early Childhood Studies
Kenyatta University
APPENDIX E: AUTHORIZATION LETTER FROM GRADUATE SCHOOL

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: E55/OL/25148/2011

DATE: 15th February, 2017

Director General,
National Commission for Science, Technology
and Innovation
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR NEWTON W. MBUNJE – REG. NO.
D55/OL/25148/2011

I write to introduce Mr. Newton W. Mbunjje who is a Postgraduate Student of this University. He is registered for M.ED degree programme in the Department of Early Childhood Studies.

Mr. Newton intends to conduct research for a M.ED Project Proposal entitled, “Impact of Feeding Programmes on Pre-school Children’s’ in Selected Performance Parameters in Kirinyaga County, Kenya”.

Any assistance given will be highly appreciated.

Yours faithfully,

MRS. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL
APPENDIX F: AUTHORIZATION LETTER FROM NACOSTI

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Ref. No. NACOSTI/P/17/12847/16169

Date: 27th March, 2017

Newton Wanjugu Mbuje
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “Impact of feeding programmes on pre-school children’s in selected performance parameters in Kirinyaga County Kenya,” I am pleased to inform you that you have been authorized to undertake research in Kirinyaga County for the period ending 27th March, 2018.

You are advised to report to the County Commissioner and the County Director of Education, Kirinyaga County before embarking on the research project.

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

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Kirinyaga County.

The County Director of Education
Kirinyaga County.
APPENDIX G: PERMIT LETTER FROM NACOSTI

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do so may lead to the cancellation of your permit.
2. Government Officer will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two (2) hard copies and one (1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.

THIS IS TO CERTIFY THAT:

MR. NEWTON Wanjugu Mbuje of KENYATTA UNIVERSITY, 43844-100 NAIROBI, has been permitted to conduct research in Kirinyaga County on the topic: IMPACT OF FEEDING PROGRAMMES ON PRE-SCHOOL CHILDREN'S IN SELECTED PERFORMANCE PARAMETERS IN KIRINYAGA COUNTY KENYA for the period ending 27th March, 2018.

Applicant's Signature

Permit No: NACOSTI/P/17/12847/16169
Date Of Issue : 27th March, 2017
Fee Recieved: Ksh 1000

Director General
National Commission for Science, Technology & Innovation