

**INVESTIGATION OF THE EFFECT OF SCHOOL FEEDING PROGRAM
ON PRIMARY SCHOOL PUPILS' ENROLMENT, ATTENDANCE AND
ACADEMIC PERFORMANCE IN TANZANIA: THE CASE STUDY OF
MUSOMA RURAL DISTRICT**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN
MONITORING AND EVALUATION OF THE OPEN UNIVERSITY OF
TANZANIA**

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by the Open University of Tanzania, a dissertation titled; “An Investigation on the effect of School Feeding Program on primary school pupils’ enrolment, attendance and performance in Musoma Rural District, Tanzania” in partial fulfillment of the requirements for the degree of Master of Arts in Monitoring and Evaluation.

.....
Dr. Hamidu Shungu
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.....
Date

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DECLARATION

I, Boniface Andrea Kamnyungu, do hereby declare that this thesis is my own original work and that it has not been presented and will not be presented to any other University or Institution for a similar or any other degree award.

.....

Signature

.....

Date

DEDICATION

I dedicate this work to my beloved daughter and son Victoria and Joshua for the sacrifice, love, patience and understanding during the period of my studies. Indeed their patience when I was away from them for long time allowed me to accomplish this research in time. Their love, care, concern, support, encouragement and enthusiasm inspired me to reach this goal.

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ABSTRACT

The study sought to investigate the effect of school feeding program on students' academic performance in Musoma Rural District. The study specifically sought to determine the nature of school feeding program, the influence of school feeding program on students' enrolment, attendance and academic performance, identify problems facing the implementation of school feeding program, identify opportunities available to support school feeding program and the strategies to solve the identified problems. The target population of this study was 108 primary schools in Musoma Rural District from which a sample of 10 primary schools was drawn with a total of 133 respondents. The correlation research design was used to carry out the study. Both primary and secondary data were used. Data were collected using questionnaires, interviews, observation and documentary review. Semi structured questionnaires were administered to the respondents. Observation checklist was used to help researcher to do a physical verification. A schedule was used to interview parents and cooks. Reports related to students' attendance and academic performance were collected to assist in comparing schools. The data tools which were used are Statistical Package for Social Sciences and Microsoft Excel used to summarize the data and find patterns. The study found that school feeding is a catalyst for improving students' attendance and academic performance. This was realized as attendance and good academic performance reflected in schools with feeding program as compared to those schools without feeding program. The study recommends that school feeding program should be enhanced in schools and to be established in schools which do not have such program to ensure students' enrolment, attendance and eventually good academic performance.

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LIST OF ABBREVIATIONS

DED	District Executive Director
FAO	Food and Agricultural Organization
MACD	Master of Arts in Community Development
MDGs	Millennium Development Goals
NGO	Non-Governmental Organization
PCI	Project Concern International
SFP	School Feeding Program
SPSS	Statistical Package for Social Sciences
UK	United Kingdom
UN	United Nations
UPE	Universal Primary Education
US	United States
WFP	World Food Program
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

The basic concept of School Feeding Program (SFP) is to provide children in public primary schools and kindergartens with nutritious meals per day. School Feeding program is an initiative to fulfill on the Millennium Development Goals (MDGs) goal number two and three, which respectively include the achievement of Universal Primary Education (UPE), and the promotion of gender equality and women empowerment. School Feeding Program (SFP) is said to play a major role in supporting universal primary education policy (Government of Ghana, 2006). The Millennium Development Goal Task Force report Birdsall, Levine and Ibrahim, (2005) cites School Feeding Program as among of the way to attract children to come to school.

Levinger (1989) says that School Feeding Program make a variance in enrollment and attendance of children to school. The program also supports poor families by giving their children a decent food daily and thus saving family diet. School Feeding Program cannot be estimated to make a straight measurable input to fight against malnutrition among school children but it makes a significant contribution towards reduced malnutrition in school children. The focus is on school feeding role in maximizing children's learning capability through the relief of short term hunger and thus increasing performance.

The review conducted in the year 2007 on school feeding programs throughout the world shows goals of increasing school enrolment, decreasing truancy, improving

educational outcomes and for helping to relieve short term and long term hunger as well as nutritional deficiencies (Greenhalgh et al., 2009). School feeding is a tool which today effectively enables hundreds of millions of poor children worldwide to attend school in developed and developing countries alike. Support from World Food Program through food for education program reached more than 21.6 million children in the year 2005 (WFP, 2005).

Furthermore, there are often several unforeseen consequences of school feeding program that necessitate continual evaluation of ongoing programs. It is against these backdrops that the research seeks to assess the school meal program in Musoma Rural District within Mara region. According to the 2007 Food and Agriculture Organization's (FAO) estimate, 923 million people in the world were chronically hungry, which was an increase of about 75 million people from the 2003-05 estimates (FAO, 2008). Many of these are children, and a vast majority of them are in developing countries. These numbers suggest that the Millennium Development Goals related to hunger and malnutrition may not be met by 2015 (FAO, 2008).

The persistence of hunger, malnutrition, and micronutrient deficiencies can have long lasting effects on the health status and productivity. Jomaa, McDonnell and Probart (2011) state that childhood under nutrition imposes significant economic costs on individuals and nations, and that improving children's diets and nutrition can have positive effects on their academic performance and behaviors at school. Alderman, Hoddinott, and Kinsley (2006) found that malnutrition led to delayed entry to school, less overall schooling, smaller stature, and 14% lower earnings as

adults. The focus of the Millennium Development Goal (MDG) number two has been to ensure Universal Education for all by the year 2015 the concept is enroll all age going children and make sure they are retained in schools and complete their primary levels of education as compared to 1990 (UN, 2005).

In Tanzania School feeding program is not new, the program was implemented during Colonial era. Soon after Independence the first president the late Mwalimu J.K. Nyerere identified three enemies of development in the country. The identified enemies are Poverty, Diseases and Ignorance The government focus was enrolment and attendance in government schools (at this time, private primary schools were not permitted). Nyerere's goal was for the majority of people to receive primary education, with a small minority going beyond that. In the year 1970s private primary schools opened and a universal primary education (UPE) program was introduced.

School fees were also eradicated resulting in a substantial increase in student enrolment and attendance to influence their performance. Currently, School Feeding Program can meet the national demand and those of Millennium Development Goals by motivating children to come to school. School Feed Program is among of the strategies to support boys and girls enjoy life at schools. School feeding program is expensive to run hence, it calls for external support from other well-wishers to supplement government efforts and strategies. It is from this background that Project Concern International (PCI) Tanzania, an International Non-Governmental Organization with head offices in United States of America decided to launch a

School feeding Project in Mara region. Hence, it is the high time to make an investigation on the effect of School feeding program and student performance.

In line with this, several studies were conducted worldwide, regional and national in the direction of assess the impact of school feed program. However, few studies were conducted in Tanzania, and no one was specifically done in Musoma Rural district which is among of the implementation in Mara area. Therefore, this study seeks to increase the inadequate literature on the effect of school feed program and student's school performance in Mara region and the nation at large.

1.2. Statement of the Problem

School feeding program implemented to some schools within Mara region with an intention to improve learning environment whereby enrollments, school attendance, performance and nutritional among disadvantaged children will be improved. Several studies have addressed the rationale for Food for Education or empirical evidence of their impact, including the results of expert seminar (WFP, 2006). The organization encourages government and community members to contribute towards the achieving its goals knowing that it cannot achieve them by acting alone.

It is from this background where research is designed to assess as to what extent Food for Education program will improve learning environment through reducing drop out, improving attendance, enrollments, performance and even nutrition to marginalized group (children). How have school feeding program improved learning environment in Musoma Rural district, Mara region in Tanzania? By so doing the study come out with the evidence on how feeding program improved learning environment and also challenges face PCI Tanzania in attaining the desired objectives. Furthermore,

opportunities identified and suggestions given out to rectify mistakes done during the implementation of first phase of the project to ensure efficiency and extension of the project.

1.3. Objectives

1.3.1. General Objective

To investigate the nature of School Feeding Program in schools, and its effect on students' enrolment, attendance and academic performance.

1.3.2. Specific Objectives

- i. To find out the contribution of School Feeding Program to students' enrolment, attendance and academic performance.
- ii. To identify problems affecting School Feed Program.
- iii. To identify available opportunities and strategies to solve problems identified in sustaining school feeding program

1.4. Research Questions

- i. How does School Feeding Program contribute to students' enrolment, attendance and academic performance?
- ii. What are the problems affecting School Feed Program?
- iii. What opportunities and strategies available to solve problems identified in sustaining school feeding program?

1.5. Scope of the Study

The study was carried out in Musoma Rural District in Mara region, Tanzania and

was confined to ten Primary schools whereby Five Schools which had school feeding program namely Mkirira A, Mkirira B, Majita A, Majita B and Nyakatende primary schools. The other five schools without school feeding program under the study are Murangi A, Murangi B, Kasoma A, Kasoma B and Lyasembe primary schools. It was centered to investigate the effect of school feeding program which is seen to be a tool for improving school learning environment. The study involved Head Teachers, Teachers, parents, students, cooks and government officials in Musoma Rural District.

1.6. Significance of the Study

The study is relevant as serve many purposes to improve School feeding program. The findings from the study enabled the organization running this program to rectify mistakes done during the implementation of the first phase. Enable the organization overcome challenges facing the implantation of the program as noted from the field. Furthermore, the school authorities understand the importance of school feeding program and put more strategies to ensure its sustainability even after the end of donor funding. The findings enabled the government to reveal the relevance of school feeding in improving learning environment and establish the same program to other schools. The findings also will be used in developing and modifying the existing government policies in education sector.

1.7. Organization of the Study

The study is organized into six chapters, chapter one presents background of the study, statement of the problem, research objectives and research question of the study, scope and limitation of the study. Chapter two presents definition of terms,

theoretical and empirical literature review research gap, conceptual framework and developed hypothesis. Chapter three presents methodology that used in the study. It presents research methodology which is broken down into research paradigm, research design strategies, study area, study population, data collection tools and methods. Other parts of this chapter variables are measured, data analysis, validity and reliability, and ethical Issues. And then the fourth chapter, it defines about the findings of the study after data gathering and analysis. Followed by The discussion chapter, finally, the conclusion and policy implication established in the sixth chapter.

1.8. Ethical Issues and Consideration

A researcher observes research ethics and was honestly and maintains integrity. Before going to the respective areas under study a message of introduction from Open University Tanzania was sought introducing a researcher to the District officials, Project Concern International (PCI) and other authorities. Assistance from the district officials was requested to introduce him down to the wards, villages and schools authority where data have been obtained. This research was done by recognizing and protection of human rights. Rights of self-determination, anonymity, and consent were highly observed. Furthermore, responses were used for the aim of the study only. And, the researcher tells the respondents the earnings of the study as well their partaker rights and protection with this sight respondents were chip in willingly. Furthermore participants were educated on the reason of conduct a research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter intends to make assessment of documents on the topic linked to this study. The review is related to the objectives of the study. The assessment focused mainly on the effect of School Feeding Program on students' enrolment, attendance and academic performance at the global and regional perspectives. The review was analyzed based on the empirical and theoretical literature.

2.2 Conceptualization of Terms

School Feeding: For the intention of this study School feeding means a prearranged action of food provision with balanced nutrients at school.

Performance: the word is referred the ability to do well in achievement of skills, understanding, and attitude as far as this study is concerned.

Enrollment: for the aim of this study enrollment means the total amount of children admitted in a school.

Nutrition: in this study refers to different components of diet that are required by the body in sufficient quantity and quality in order to develop and reproduce and lead a normal healthy life.

Malnutrition: It is deficiency of nutritious diet leading to illness.

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

2.3 Theoretical Framework

This research was directed by the theory of human needs developed by Abraham

Maslow. Regarding to this theory developed by Abraham Maslow (1943), humans are motivated by a wish to attain certain life goals. Achieving goals supports them to satisfy specific requirements and wants. Maslow classified wants into hierarchy of needs, in which some needs have to be met before human moves to satisfy others (Maslow, 1943). As it denotes the needs are hierarchical with lowest rank being most important and must be met before moving up to the rank or ladder of needs. Human actions are focused on collecting the needs in the last order, and from there will move to higher ranks as needs are satisfied. Some least desires are crucial to cover standard of life. These recognized as physiological needs, they comprise food, clothing, shelter and health.

2.4 Maslows' Hierarchy of Human Needs

According to Maslow's hierarchy of needs it demonstrates that the first stage of physiological needs are the needs that any person them needs every day for existence or life and comprises elementary needs that is food, cloth and shelter. Another level of physiological needs is security. The third level is of communal needs that are a need to fit to a kind group. This contains friendship, love and belonging. The fourth level is that of self-esteem, which a sense of self-respect and self-motivation. It also comprises how one can share to others. Last level in this theory is self-actualization, whereby a person struggles to a viable capability and personal progress.

According to Maslow, human being goes following a hierarchy needs beginning with physiological needs such as food, cloth and shelter to much higher needs such as emotions. For a student to attain this need care giver or care takers like parents

and teachers should make sure that they offer food to students purposely to have healthy growing. Students should be given food so as to ensure that they do better in classes and as well as at home. Failure to that it will make unhappiness and eventually affects students' attendance and performance. According to Maslow's hierarchy of needs, shows that students are usually joyful once want are met. Learning goes on smoothly when food is provided to school and once the wants are met there is happiness.

The model shows the merits of diet to human being. From a wider sight of improvement, it means that countries must fight to offer basic needs for use by their people. For developing countries include Tanzania, it meaning short term hunger must be disallowed to students in schools by making basic needs like foods available to all students. As human being cannot live without food, the government must work out to decrease the problem of food, especially to vulnerable groups like children, women and people with different physical disabilities.

The government should make sure diet assistance is offered in schools through schools feed program. School Feeding is a planned activity of giving enough nutrients and balanced diet to children at school. It is a program that is organized at any level such as school, district, nation, and region and worldwide to facilitate the feeding of students in school. This will stimulate good health, high academic motivation such as students' involvement, attention in class and will reduce short term hunger. This program needs to be monitored properly to ensure that all students are benefiting (King, 1966).

2.5 Empirical Literature

Children in poor health began school later in life or not at all. A study in Nepal found that the possibility of attending school was 5% for stunted children versus 27% for children of normal nutritional status (Moock and Leslie, 1986). In Ghana malnourished children entered school at a later age and completed fewer years of school than better nourished children (Glewwe and Jacoby, 1994). Some of days that a child appears school are linked to cognition and performance (Ceci, 1995; Jacoby, Cueto and Pollitt, n.d.). School Feeding Programs can have a helpful result on rates of enrollment and attendance (Joy Miller Del Rosso, June 1999:7) According to (Moore, 1994), the assessment of an existing school feeding program in Burkina Faso founded that school cafeterias were related with improved school enrollment, regular attendance, constantly lower repeater rates, lower dropout rates in underprivileged provinces, and higher achievement rates on national exams, particularly between girls (Joy Miller Del Rosso, June 1999:7)

In 1996 a small pilot study on School Feeding Program in Malawi was assessed for its outcome on enrollment and attendance. More than three month period there was a 5% rise in enrollment and up to 36% progress in attendance/absenteeism matched to control schools over the same period (WFP, 1996). Niger takes one of the five lowest school enrollment rates in the world; feeding program in school is planned to improve attendance of migrant and transhumant families, mostly of girls. Beneficiaries obtain the same of the total day-to-day suggested food intake (2,079kcal) in three meals per day. In adding, as an incentive for girls' involvement in schools, various families obtain an extra take-home ration.

Proof from past knowledge with the School Feed Program indicates that it contributes to its objectives: when cafeterias have been shut, even conditionally, fast and high absenteeism follows and children are quieting from school. In regions with nomadic and transhumant populations, the school year cannot commence till food stocks arrive (WFP, 1995; 1996). Though not feeding program in school is the traditional sense, school-based food supply has been used effectively to increase enrollment and attendance among school-age children, mostly girls (Joy Miller Del Rosso, June 1999:7).

In Bangladesh school feeding program increased enrollment by 20% versus a 2% decline in non-participating schools (Ahmed and Billah, 1994). In Pakistan, a program offers an income allocation in the form of one or two tins of oil to families whose girls appear to school for 20 days per month (Joy Miller Del Rosso, June 1999:7) The Louw, Bekker, and Wentzel-Viljoen 2001 evaluation (hereafter referred to as Louw et al.) focused on evaluating the effectiveness and efficiency of providing food to school in terms of particular execution and operational issues.

The viewpoint of this cluster of investigators was that if the school feed program might be correctly designed and effectively executed, the benefits of providing food to school outweigh the investment made by government (Louw et al., 2001: viii). To support their view of school nutrition, Louw et al. (2001: 156 and 157) cited international studies that record the helpful effect of provision of food to school in attendance, public participation in schooling, and reduced malnutrition rates. Results from their sample study also shown increases in areas of attention spans, punctuality, school performance, and the mitigation of temporary famine (Russel Andrew

Wildeman and Nobuntu Mbebetho dec. 2005:7)

It has been reported recently in Chad that the school meals programs increases attendance and help children to learn. “This year 2015 School meals offer parents an incentives to send their daughter to school and keep them there (retain), this reducing gender literacy gap” <https://www.wfp.org/stories/school-meals-chad>, (2015)

Starving children are less possible to go to school and less able to learn if they do appeared. Starvation and poverty straight relate to educational performance. The first report of the Millennium Development Goals Task Force on Education and Gender (2003) said; generally educational performance both enrollment and retention connect very intensely with revenue within a country (Joy Miller Del Rosso, June 1999:7) “ In the end ; only about 20 percent of the poorest children and 50 percent of middle income children complete primary school, while nearly all of the children from the better off households do” www.unep.org/training/programs, (2011).

Feeding children in school has constantly been confirmed effective by raising enrollment and attendance and in sinking dropout rate between school age children. According to the UNICEF report of 2002 about 60 percent of the 100 million of school children in the world are girls. World Food Program studies of take home ration programs which recompense the families of girls who enroll and attend school frequently (usually a minimum of 22 days per month), show dramatic results. In one province in Pakistan, girls enrollment enlarged by 247 percent among the time the school feeding program initiated in 1994 and 1998, in some provinces the rise was 197 percent in the extreme north province of Cameroon, the program achieved in increasing enrollment by 313 percent (Joy Miller Del Rosso, 1999:7)

In Tanzania, World Food Program Representative and Country Director Ronald Sibanda reported that the program of providing food to schools helps to ease temporary hunger to school children. “School meals encourage school enrolment and attendance and improve learning through better concentration,” (www.ippmedia.com/frontend, (2013). Findings from teachers informed that even the academic performance in their schools had developed as an outcome of progresses recording in the World Food Program School feed program. The program is together executed by the WFP and the government of Tanzania under the Ministry of Education and Vocational Training. Therefore, this study aimed to discovery out more evidence on the relevance of school feeding and possible ways to sustain and extend the program to other schools.

2.5.1 Effect of School Feeding Programs on Children Attendance

According to Feingold (1970), there is strong proof signifying that school feeding programs can raise attendance rates. Some of the Millennium Development Goals (MDGs) were to offer universal primary education by 2015. School Feeding Program or carry off home ratios aid as encouragements for registering children in school and boosting everyday attendance. Due to the fact that when children go hungry they cannot be willing to stay in school and parents could not afford to register their children when they understand that they will be able to cater for their nutritional requirements.

According to Jensen (2010), School Feeding Program commonly takes place in the perspective of broad national school reform programs. These improvements should emphasis on other important contributions to education and learning such as teacher

improvement, curriculum reforms and student valuation. National ministries or managerial dealing with education must not be inspired to undertake School Feeding Program at the expenditure of other educational responses as it is hard politically to reject food assistance. According to Pediatre (2001), attendance and school performance are critically boosted by school feed program. Several schools are now fighting to achieve just about functional education systems and to adopt the extra burden of food supply (Otieno, D 2014:9). Mungai (2004) in his study findings on the role of School Feeding on education progress found that it is valued mechanism for encouraging enrollment and nurturing attendance. Also it assists toward improve learning performance due to the good attendance.

2.5.2 Effect of School Feeding Programs on Academic Performance

According to Bowlby (1988), food quantity and quality should be viewed into. Children must be given right nutrients to improve their growth, progress and life in the society. He also said that the rate of the meals have to be noted. Meal must be aided frequently for schools to set good projects and programs to affect this. He also said that there must be a plan or department concerning this matter within the school. Offering proper nutrition and helping stimulation of a child's brains are vital mechanisms of children in the sense that they improve the development and organization of the brain (Otieno,D 2014:9).

According to Ann (1986), approves that human body functions best when accompanied by the right varieties of diet in the right proportion. Food is a basic requisite and a right for survival for all humanity particularly for children whose rights are to appreciate the highest achievable standard of health, nutrition and

education, C.R.C (1989). Food is a basic biological want, Maslow (1943) has highlighted that human beings have a hierarchy of needs extending from lower level needs of food for life and safety to higher needs. Hence this must be offered before we can request the children to be encouraged to learn (Otieno,D 2014:9). According to Pediatre (2001), attendance and school performance are critically improved by feeding program to school. Feingold (1970), indicated that there is proof strongly telling that feeding school program can rise attendance rates and performance (Otieno,D 2014:9).

2.6 Conceptual Framework

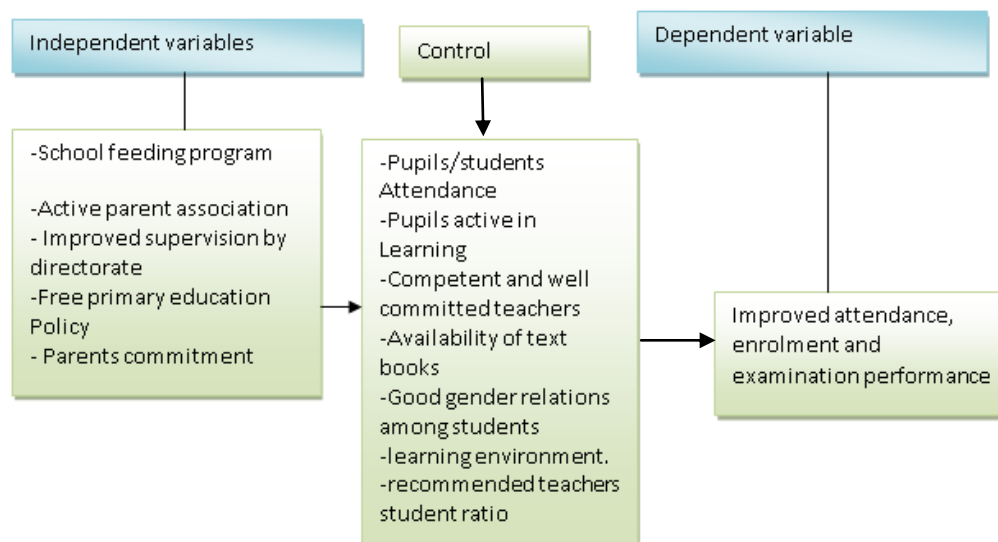


Figure 2.1: The Conceptual Framework

Source: Author's Own Construction

2.7 Research Gap

Adekunle, D. Taylor¹ & Christiana, O. Ogbogul (2016) doing a study on The Effects of School Feeding Program on Enrolment and Performance of Public Elementary School Learners in Osun State, Nigeria, found out that School Feeding

Program is a beneficial intervention which has improved the enrolment and performance of primary school learners in Osun State Nigeria and improved, performance and completion of basic education. Mushi, Hilda (2017) also conducted a study on The Effect of School feeding on Academic Enhancement in Arusha City Community Primary Schools revealed that School Feeding Program boost learners enrollment, classroom attendance and attention by the learners therefore boost of academic progress.

Furthermore another study by Maijo, Shabani (2018) on the Impact of School Feed Program on Learners' Academic Performance in Mlunduzi Ward, Tanzania found progressive connection among schools with meal program in increased performance of the students. The research was done in four primary schools in Mpwapwa district in Dodoma Region Tanzania. The School Feeding Programs was funded by donors, given the semi-aridity of the district it witnessed returning hunger which was affecting Students education the respondents in this study also involved examination candidates for the said years.

Another research conducted on School meal Program and Its Effect on Academic Achievement in ECDE in Roret Division, Bureti District in Kenya (Chepkwony, B C et al, 2013) revealed school feeding program remove temporary hunger among leaners and increase their mental development and hence concentration in class and better performance. This study compared community early childhood education and private initial childhood education of children age 0-6. This is the most demanding age in terms of food nutritional needs for growth and survival. When one

compromised the other suffer. When nutritional needs are not met, food is given for survival and hence stunted growth and cognitive development retardation.

However the Nigerian and Kenyan education contexts are different from Tanzania since primary education is state and county managed in Nigeria and Kenya respectively giving these sub national levels of governance power and opportunity to use locally devised systems of school feeding. The research done in these countries has revealed that these school feeding programs are home grown, that is, funding is by the parents and sub national governments. Hence these studies cannot give us a clear picture on the contribution of school to students' enrollments, attendance and performance.

Studies conducted in Tanzania (Mushi, 2017; Maijo, 2018) have shown a different modality of funding and coordination but both studies concentrated on Primary schools of two different regions and setting. Mushi (2017) concentrated in Arusha City which is urban and its dwellers have improved living standards, their income is a bit higher, the sample was bigger with ten schools and Maijo (2018) study concentrated on rural setting with four schools, lower living standards of parents and income.

The similarities of these programs are that they are donor funded. And yet these studies could not be generalized to understand other school feeding programs in Tanzania given different community settings and funding models of the school feeding programs. As noted above many studies have been done to evaluate the impacts of the program of providing food to school on student's academic

performance. Unfortunately, no investigation has been prepared to establish the effect of school feeding program on students' enrollment, attendance and academic performance funded by PCI in Mara region especially Musoma Rural District

The investigation was designed to examine on the effect of school meal program as well as student's academic performance in Musoma Rural District. In the conceptual framework the student attendance and performance depends on; School feeding program, parents commitment, active parent association / committees, competent and committed teachers, recommended teachers student ratio, free primary education policy, Availability of text books, good gender relations among students and learning environment.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology. It is organized in the following sections.

3.2 Research Design

The design of this study is based on non-experimental research category through Correlation design. The design was employed to allow the collection of data and make comparison among variables to draw conclusion. According to Kothari (2004) says, research design is a plan, a roadmap and blueprint strategy of investigation conceived so as to obtain answers to research questions. Through correlation design the researcher use the analyzed data to determine if school feeding program and academic performance are related or correlated. The researcher determined by comparing those schools with feeding and those without. Researcher measured two variables and then computes a statistical measurement called correlation coefficient to identify the relationship between school feeding and academic performance.

3.3 Study Area

The study was carried out in Musoma Rural District within Mara region, the selected area of study based on the fact that the district is one among three districts in Mara region implementing school feeding program with support from the People of United States of America through Project Concern International (PCI). The unit of analysis was 108 primary schools in Musoma Rural District, whereby 73 primary schools have a feeding program and 35 primary schools do not have feeding

program. The study comprised of District officials, Head teachers, and teachers responsible with feeding program, parents, students and cooks in the sampled schools.

3.4 Study Population

Unit of the study was all 108 primary schools in Musoma Rural District, whereby 73 primary schools have a feeding program and 35 primary schools do not have feeding program. The study population was 6573 students from 10 primary schools. Furthermore, the study comprised of District officials, Head teachers, and teachers responsible with feeding program, parents, students and cooks in the sampled schools.

3.4.1 Population Sample and Sample Size

The information was collected from different representatives of different categories so as to come up with relevant and required information. The researcher took sample of 10 schools (05 schools with school feeding program and 05 schools without school feeding program) with a total of 133 respondents. The respondents' were 10 Head teachers, 05 Teachers responsible for feeding program in schools, 100 students, 10 parents, 05 Cooks and 03 District officials. Both male and female were represented in the sample. Formula used to calculate sample size was from Kothari, (2004):-

$$n = \frac{z^2 \cdot p \cdot q \cdot N}{e^2(N - 1) + z^2 \cdot p \cdot q}$$

Whereby z - is critical value of confidence interval

N- Sample frame

p - Proportion of schools with feeding program

q - Proportion of schools with none feeding program

e – Error

From the calculation the sample size was 100 students.

Table 3.1: Number fo Distribution of Sample Size

Wards	School	District Officials	Head Teachers	Teachers	Students	Parents	Cooks	Total
		3						3
Mkirira	Mkirira A		1	1	20	2	1	25
	Mkirira B		1	1	20	2	1	25
Majita	Majita A		1	1	20	2	1	25
	Majita B		1	1	20	2	1	25
Nyakatende	Nyakatende		1	1	20	2	1	25
	Murangi A		1					1
Mugango	Murangi B		1					1
	Lyasembe		1					1
	Kasoma A		1					1
	Kasoma B		1					1
Total		3	10	5	100	10	5	133

Source: School Feeding Research, 2019

3.4.2 Sampling Procedure

Sampling is the process of selecting a number of individuals or objects from a population such that the selected group contains elements representatives of the characteristics found in the entire group, (Orodho and Kombo 2002). Hence, this study employed both probability and non-probability sampling procedures.

3.4.3 Probability Sampling

The probability sampling was used in the study, Simple random techniques was used to find out Wards, Schools, students and parents. In the District there are 108

primary schools, the researcher used simple random sampling technique to obtain 05 schools with feeding program and 05 schools without feeding program. In this process the researcher wrote names of all wards in the District in pieces of paper and separate wards with feeding program and those without.

The pieces of papers were mixed in a box; thereafter, 4 wards namely Nyakatende, Majita, Mugango and Mkirira were drawn. The same procedures were observed in selecting schools. The name of all schools in the selected wards were written into the piece of papers and mixed in a box and 05 schools with feeding program (Nyakatende, Majita A, Majita B, MkiriraA and Mkirira B) and other 05 schools with none feeding program were drawn (Murangi A, Lyasembe, Kasoma A, Murangi B and Kasoma B) In schools simple random techniques was used to obtain respondents students. The total number of students was obtained to determine the nth number. This method allowed researcher to draw 100 students.

3.4.4 Non Probability Sampling

Non probability sampling was used to those District officials, Head teachers, teachers and Cooks who directly implement the program and other respondents based on their position in the program.

3.5 Methods of Data Collection

During research process both primary and secondary data were collected. The primary data were collected from the field at the first hand and secondary data were obtained through review of various documents, such as schools academic reports,

schools attendance reports and District reports. The identified schools and respondents were visited for the aim of gathering required information; data were obtained through Interviews and questionnaires.

3.5.1 Data Types and Sources of Data

Both primary and secondary sources of data were used in the investigation. The primary data were gained from interviews, whereas secondary data were obtained from schools reports, records and District offices.

3.5.2 Primary Data

Primary data defined as the data collected from the ground. This method was used by the researcher through visiting ten Schools in three wards with the purpose of collecting data. Information on the outcome of school meal on students' academic performance, students perception on feeding program, student attendance trends, challenges facing sustainability of school feeding program, opportunities available to sustain and establish school feeding programs and possible solutions to the identified problems.

3.5.3 Secondary Data

Secondary data provide second hand information and include both raw data and published once (Saunders et al, 2000) This study involved secondary data from schools reports records, District report office, published report in the study area and from library. Also, some data were obtained from different sources such as research reports, brochures and documents. Some of the secondary data supplemented the

primary data; most of these data were concerned with the students' academic reports.

3.5.4 Interview Method

Interview is the method of collecting data which involves presentation of oral or verbal and reply in terms of oral or verbal responses. The researcher organized and conducted face to face interviews with respondents to gather information for the purpose of the study. This method was more appropriate as it provided instant answers and both respondents and researcher had chance to secure clarity as need arises. Schedules interview and structured interview were used in data collection. Kvale (1996) says interview is the backbone of the studies, and Baker (1998) interview formats vary along a continuum ranging from structured, unstructured to semi-structured. This method enabled the researcher gather information from 20 parents, 100 students and 05 Cooks.

3.5.5 Questionnaires

A questionnaire is regarded as a series of questions, each one providing a number of weighted means answers from which the respondents can choose. These methods of data collection consist of number of questions printed in a definite order in a set of forms. Questionnaires were administered to the 03 District Officials, 10 Head teachers and 05 Teachers responsible for feeding program were given questionnaires to fill. Through this method it was easier for the researcher to get information in a wide geographical area. Mugenda (1999) says, questionnaires are commonly used to obtain important information about the population. The method is cheap and economically sound as compared to other methods and it is possible to the respondent to fill out questionnaire with researcher's absence.

3.6 Data Processing

The collected data were processed using a computer through Statistical Package for Social Sciences (SPSS) v.20 program, Microsoft Excel, and manual. The data process involved changing the data from hard copy to soft copy, to group and compile data in accordance to their category, that enhance to reduce the susceptibility of common errors hence simplify data analysis procedures.

3.6.1 Data Analysis

The collected quantitative and qualitative data were analyzed by Statistical Package for Social Sciences (SPSS) v.20 computer program. Wallimann, (2001) writes that, data analysis brings order, structure and meaning to the mass of data and it is a time consuming, creative and fascinating process. The process facilitated the proper recording and enables the researcher to discover the relevance of data collected in consistence with objectives of this study. Quantitative data were analyzed using statistical measures like percentages, mean scores, standard deviations. Qualitative data were analyzed by content analysis.

Content analysis is the systematic qualitative description of the composition of the objects or materials of the study (Mugenda and Mugenda, 1999). Comparative analysis was used to compare the status of schools with feeding program and those without School Feeding Program affecting students' attendance and academic performance. The findings were presented in forms of tables, graphs, figures, pictures and charts.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND DISCUSSION OF THE FINDINGS

4.1 Introduction

This chapter consists of data presentation, analysis and discussion. The research topic was “An investigation of the effect of school feeding program on students’ Academic performance in Musoma Rural District.

4.2 Demographic Information

Here in part the researcher analyses the sex, familiarity, digit of years in the current place of head teachers and teachers responsible for feeding program and students.

4.2.1 Head Teachers

The researcher was interested in knowing the sex, age; teaching experience, number of years in the present station for the head teachers. The researcher found that 05 teachers were males and 05 were females whose age was between 25 and 55 years and majority being 31-40 years and above. 40% of all the respondents had teaching experience of 6-10 years while 30% had a teaching experience of 11-15 years and 20% had teaching experience above 15 years and 10% had teaching experience of 1-5 years. Table gives work duration of head teachers at the current station.

Table 4.1: Age and Sex of Head Teachers

		Age				Total
		25-30	31-40	41-50	above 51	
Male	Count	1	3	1	0	5
	% of Total	10.0%	30.0%	10.0%	0.0%	50.0%
Female	Count	0	2	2	1	5
	% of Total	0.0%	20.0%	20.0%	10.0%	50.0%
	Count	1	5	3	1	10
	% of Total	10.0%	50.0%	30.0%	10.0%	100.0%

Source: School Feeding Research, 2019

Table 4.2: Teaching Experience of Head Teachers and the Duration of Service in the Present Station

Head Teachers teaching experience and duration in the present station			
Teaching experience	Years	Frequency	Percent
	1-5	1	10
	6-10	4	40
	11-15	3	30
	Above 15	2	20
	Total	10	100
Duration in the present station			
		Frequency	Percent
	1-5	2	20
	6- 10	6	60
	11- 15	1	10
	Above 15	1	10
	Total	10	100

Source: School Feeding Research 2019

From the table many of the head teachers had been in the present station in 6-10 years. This is given by 60% of the total respondents. They were followed by 20% of the respondents who had been in present station for 2-5 years. The least 10(%) had been in the present station for 11-15 years and another 10% had been in the station for above 15 years.

4.2.2 Parents

The researcher wanted to know sex, age, marital status, number of children, whether the respondent children are going to school and if the children take their lunch in school. From the result 40% of the respondent parents were male and 60% were female. Out of all respondent parents 75% were married. The respondent parents show they had at least one child with the highest of children noted to have four children in one family unit. This was mostly among the married couples. Solitary

guardian had maximum two children. All children went to school. From the findings 95% of the children took their lunch in school while 05% do not take their lunch at school. It was well-known that no parent shows that their children criticized about anything concerning the food.

4.2.3 Students

The researcher was concerned to know the sex and age of students' respondents. Respondents were chosen from class Four and Five whereby class four were 47% and class five were 53% of the total student respondents. The researcher found that 54% were girls and 46% were boys whose majority where at the age of 10-14 years account for 92% and 08% where at the age above 15 years. Table no. 4.3 illustrates the same.

Table 4.3: Student Sex and Age

Sex		Frequency	Percent
	Boys	46	46
	Girls	54	54
	Total	100	100
Age			
	0-14	92	92
	Above 15	8	8
	Total	100	100
Class			
	4	47	47
	5	53	53
	Total	100	100

Source: School Research 2019

4.2.4 School Feeding Program

In this regard, the researcher found out that in Musoma Rural District 73 Schools have school feeding program and 35 Schools do not have school feeding program.

This implied that 68% of schools have feeding program supported / funded by a private Donor (Project Concern International – PCI) an organization based in United States of America. The organization provides food aid that means they import food from United States of America to the selected schools in Musoma Rural District. The figure Number 2 Illustrate the same.

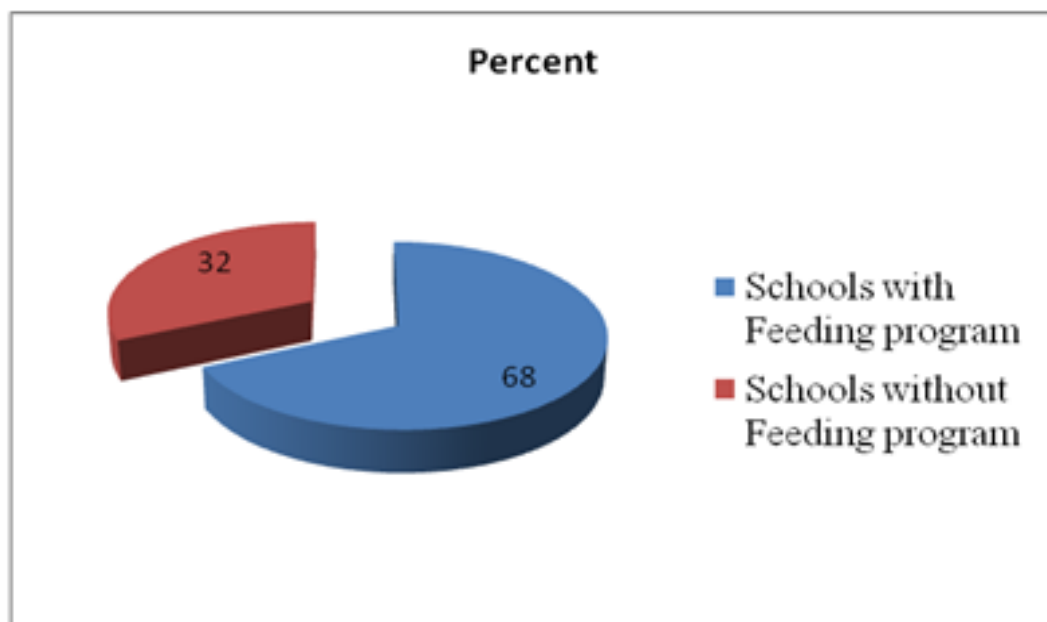


Figure 4.1: Present Schools with Feeding Program in Musoma Rural District

Source: School Feeding Research, 2019

Out of all respondent schools with feeding program 90% had the program for a period of 07 years, while 10% had the program for a period of 4 year. This express the plan of school feeding program was not used for long in Musoma Rural District. The researcher was interested in knowing if Head teachers or teachers call parent meetings to discuss issues related to school feeding program. All the head teachers agreed that they had called parent meetings to make consciousness about school feeding program. The responses revealed that parent's do attend the meetings when called.

4.2.5 Motives for School Feeding Program

The researcher was eager in knowing what motivated people to initiate School feed program in Musoma Rural District. Out of all respondents 55% indicated that the school feed program was initiated to improve learner academic performance, 25% of respondent indicated that the program was initiated to increase student enrollment, and 15% claimed that the program initiated to improve student attendance and 05% indicated that the program was initiated to improve student health status. This implies that the idea of having school feed program was to develop education through increasing enrollment, attendance, health and academic performance. This concurs with Louw, et al. (2001: 156 and 157) who quoted international studies that record the motives for school feeding one being school attendance, community involvement in schooling, reduced malnutrition rates, gains in areas of concentration spans, punctuality, school performance, and the alleviation of temporary hunger.

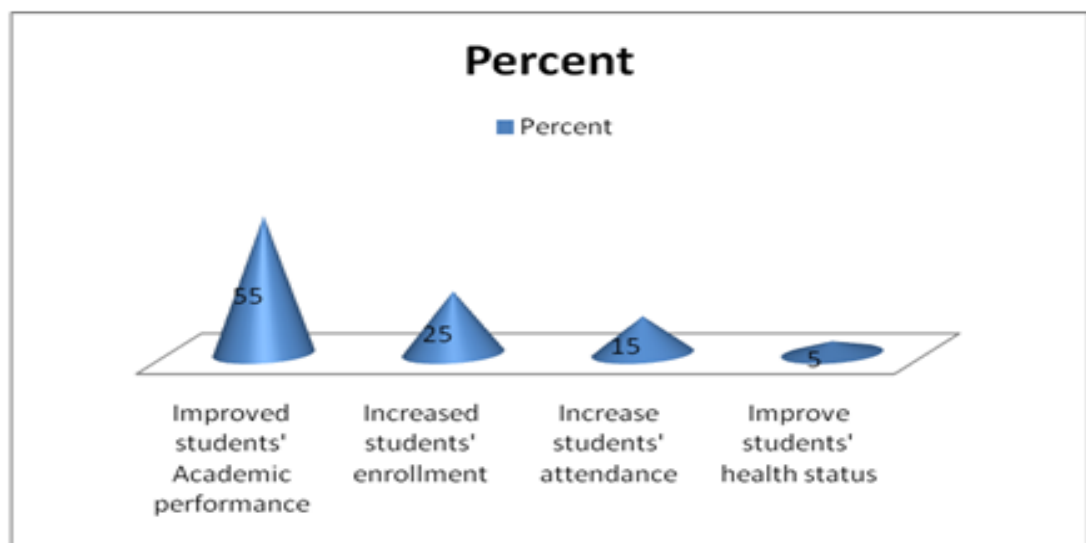


Figure 4.2: The Graph Indicate the Motives for School Feeding

Source: School Feeding Research, 2019

4.2.6 Community Responsibilities towards School Feeding Program

The investigator was concerned to recognize the role or contribution of community members on the success of School Feeding Program. From the research findings all respondents confirmed that community members have a role to implement school feeding program more successfully. From the five schools with feeding program researcher asked head teachers, teachers as to whether community members do contribute to the feeding program. The researcher found that community members contribute money and labor only. Respondents did not mention if they play a role of collecting firewood and water. This concurs with the baseline and follows up survey carried out by WFP in 2001 to school feeding program in 19 countries where results showed that 72% of parents were donating financial or in-kind to Worlds Food Program (WFP) assisted school program.

4.2.7 Types of Meal Offered in School

In relation to types of meals offered the findings from respondent schools revealed that all schools offered only lunch (rice and beans). From the findings and through researcher own observation no school was found offering breakfast.

4.2.8 Sources of Water

The fact remains that no living organism can survive without water, water is life. In this regard researcher was interested to know the sources of water used for cooking food at schools. The findings revealed that no school is served with piped water; hence they obtain water from different sources such as wells, lake and dams. The findings revealed that water used in schools is not treated to prevent germs. Furthermore, the researcher was interested to know how water is collected and stored

ready for use in schools. The idea was to know if there is a container for storing water for use in schools. Through observation, researcher found that at most all school visited had no container for water storage. Students bring water from the identified sources and stored on their tin and buckets.

Researcher was interested to know who cook the food. The finding revealed that all schools having school feeding program had a person or people who cooked the food and is/are employed by the community members. The village government signed the contract with cooks; they are paid based on the donation obtained from community contribution. The researcher was interested to know who serves children with food. Out of all respondent teachers and students 80 % revealed that cooks are responsible, 20% said students themselves are responsible. This means that majority of the school cooks are responsible to serve children with food to ensure equal share is given to each student. Researcher visited all school during lunch time, through researcher's observation it was exposed that even though the reality that the respondent said that cooks are responsible for serving children, all schools visited students were found serving their fellows.

4.2.9 Sources of Energy for Cooking

The researcher sought to know the sources of energy used for cooking food at schools. All responses from schools visited revealed that all schools are using firewood.

4.2.10 The Effect of School Feeding on Students' Academic Performance

The investigator was interested to know as to whether school feeding had an effect on students' academic performance. The researcher gathered information from

students' academic performance within standard seven national examinations for the period between 2013 and 2018. The data were collected from schools with feeding and those without in order to make comparisons. The table below presents the students' academic trend.

Table 4.3: Records of Students' Academic Performance in Schools with Feeding Program

School Name/Code	Year	Total number of students who sat for National Examination	No. of students passed the National Examination	Percentage of students who passed the National Examination	Average % pass of all schools for year
A	2018	69	15	21.74	
B		86	56	65.12	
C		102	60	58.82	
D		55	25	45.45	
E		115	56	48.70	47.97
	2017				
A		50	27	54.00	
B		92	61	66.30	
C		89	61	68.54	
D		52	27	51.92	
E		78	38	48.72	57.90
	2016				
A		63	43	68.25	
B		87	70	80.46	
C		76	59	77.63	
D		57	11	19.30	
E		73	37	50.68	59.27
	2015				
A		91	38	41.76	
B		68	24	35.29	
C		108	47	43.52	
D		81	14	17.28	
E		65	19	29.23	33.42
	2014				
A		77	28	36.36	
B		79	48	60.76	
C		75	37	49.33	
D		76	16	21.05	
E		71	16	22.54	38.01
	2013				
A		54	32	59.26	
B		75	56	74.67	
C		57	25	43.86	
D		65	17	26.15	
E		69	25	36.23	48.03

Source: School Feeding Research, 2019

Table 4.4: Records of Students' Academic Performance in Schools without Feeding Program

School Code	2018	Number of students who sat for Standard Seven National Examination	Number of students who passed Examination	Percentage of students who passed the National Examination	Average % pass of all schools for year
F		71	20	28.2	
G		63	19	30.2	
H		56	23	41.1	
I		64	21	32.8	
J		55	18	32.7	32.99
	2017				
F		74	31	41.9	
G		69	24	34.8	
H		79	34	43.0	
I		53	23	43.4	
J		67	25	37.3	40.08
	2016				
F		79	23	29.1	
G		67	24	35.8	
H		59	21	35.6	
I		66	29	43.9	
J		61	19	31.1	35.12
	2015				
F		65	22	33.8	
G		56	19	33.9	
H		54	17	31.5	
I		57	22	38.6	
J		63	24	38.1	35.19
	2014				
F		66	21	31.8	
G		53	16	30.2	
H		56	22	39.3	
I		65	28	43.1	
J		74	24	32.4	35.36
	2013				
F		69	21	30.4	
G		59	18	30.5	
H		53	17	32.1	
I		61	23	37.7	
J		56	19	33.9	32.93

Source: School Feeding Research, 2019

Table 4.5: Records of Students' Academic Performance in Schools with and without Feeding Program

Years	Average % Pass with Feeding Program	Average % Pass without Feeding Program
2013	48	33
2014	38	35
2015	33	35
2016	59	35
2017	58	40
2018	48	33

Source: School Feeding Research, 2019

From the tables above, Schools in Musoma Rural District like others primary schools in Tanzania do a standard seven National Examination in each academic year. Table 4.4 and figure 4.3 shows the results for standard seven obtained from schools with feeding program coded A,B,C,D,E and those schools without feeding program coded F,G,H,I,J. The research findings showed that those primary schools with feeding program have performed superior as compared to those schools without feeding program in school. The lowly stand for schools that have a feeding program as from 2013 to 2018 was 33.4 whereas the lowly stand for schools without feeding program as from 2013 to 2018 was 33 percent.

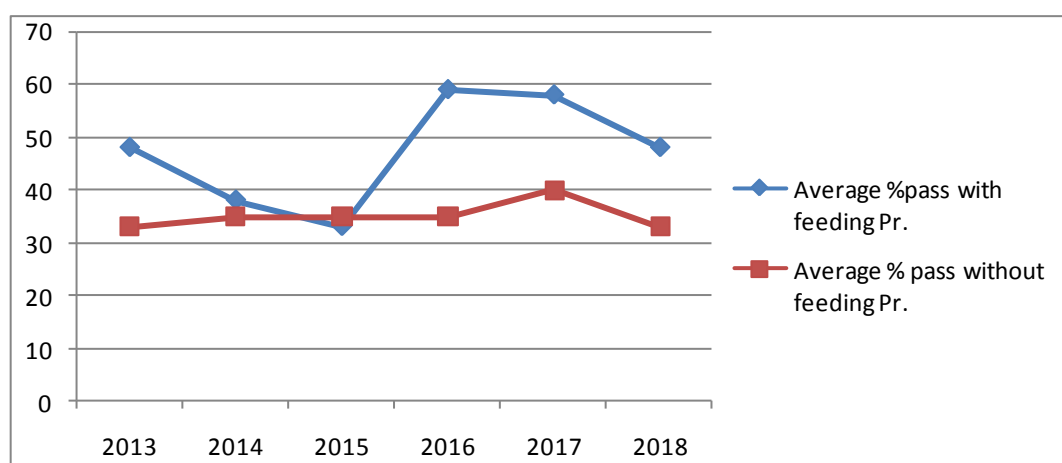


Figure 1.3: Records of Students' Academic Performance in Schools with and without Feeding Program

Source: School Feeding Research, 2019

The findings revealed that the uppermost stand for the schools that had a feeding program for the year 2013 to 2018 was 59.2, whereas the peak indicate for schools without feeding program for the similar years was 40 percent. Furthermore, the findings indicated that the increase was observed since 2012 when school feeding started in schools. This concurs with findings of Pediatre (2001), that attendance and school performance are greatly enhanced by school feeding program. Many schools are already struggling to manage barely functional education systems and to assume the additional burden of food distribution.

Mungai (2004) in his research findings on the role of School Feeding in education development also found that it is valuable instrument for stimulating enrollment and establishing attendance which help to improve education and student academic performance for the reason that of the regular attendance. This obviously shows that School feeding program was among the reasons that give to the students' academic performance. The reality is that a number of schools which do not have School Feeding Program were recording almost the same performance with those that have School Feeding Program this indicate that there were other factors that contributed in maintaining their performance and not feeding program only.

4.3 The Influence of School Feeding Program on Students Attendance

The researcher was interested to know the trend of students' attendance in schools whereby records were drawn from those schools with feeding program and compared to those schools without feeding program. The intention was to assess as to whether school feeding program had influence on students attendance. The

researcher took attendance records for the month of January, February, March, April, May and July 2019. It was discovered the following outcome in regards to total of students registered and exactly number of students who go to school for the named months for the year 2019. The tables and figures below illustrate the same findings.

Table 4.6: Trend of Students ‘Attendance in Schools with feeding Program Jan-July 2019

	Attendance Average in percentage as from January 2019						
	Jan	Feb	March	April	May	July	Mean (%)
A	97	98	97	95	98	97	97.0
B	94	96	95	95	94	95	94.8
C	91	93	96	96	96	96	94.7
D	95	96	97	96	97	95	96.0
E	93	95	95	96	96	93	94.7

Source: School Feeding Research, 2019

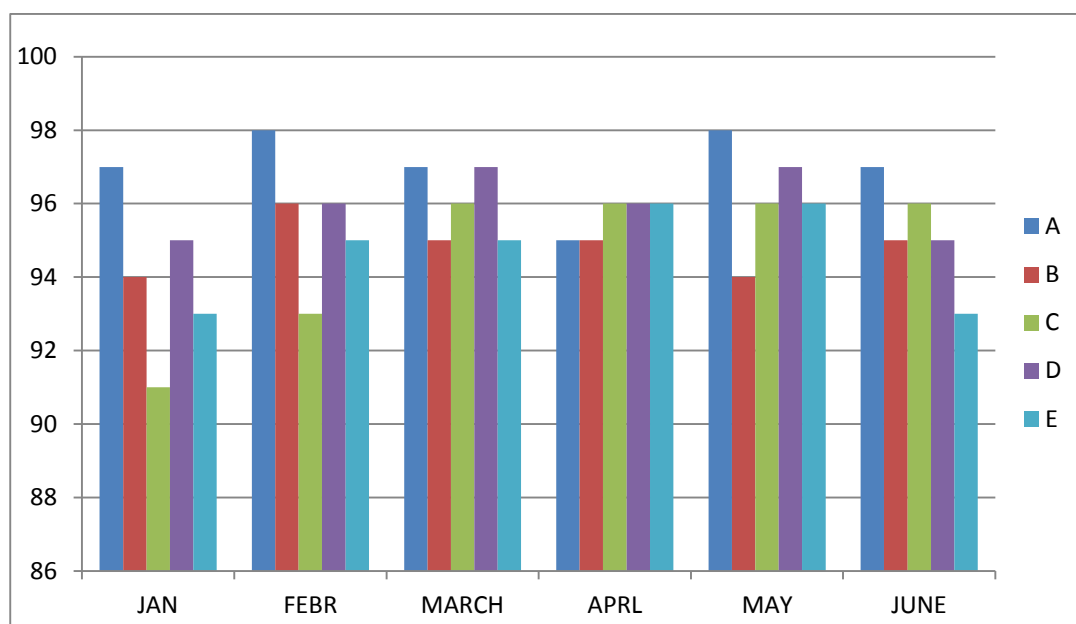


Figure 4.4: Present Attendance Average in Percentage

Source: School Feeding Research, 2019

Table 4.7: Trends of Students Attendance as from January –July 2019 to Schools without Feeding Program

	Attendance Average in Percentage as from January 2019						
	Jan	Feb	March	April	May	July	Mean (%)
F	84	81	81	78	78	76	80
G	83	79	90	86	78	82	83
H	79	83	80	76	80	75	79
I	75	81	81	73	75	80	78
J	85	83	81	77	79	78	81

Source: School Feeding Research, 2019

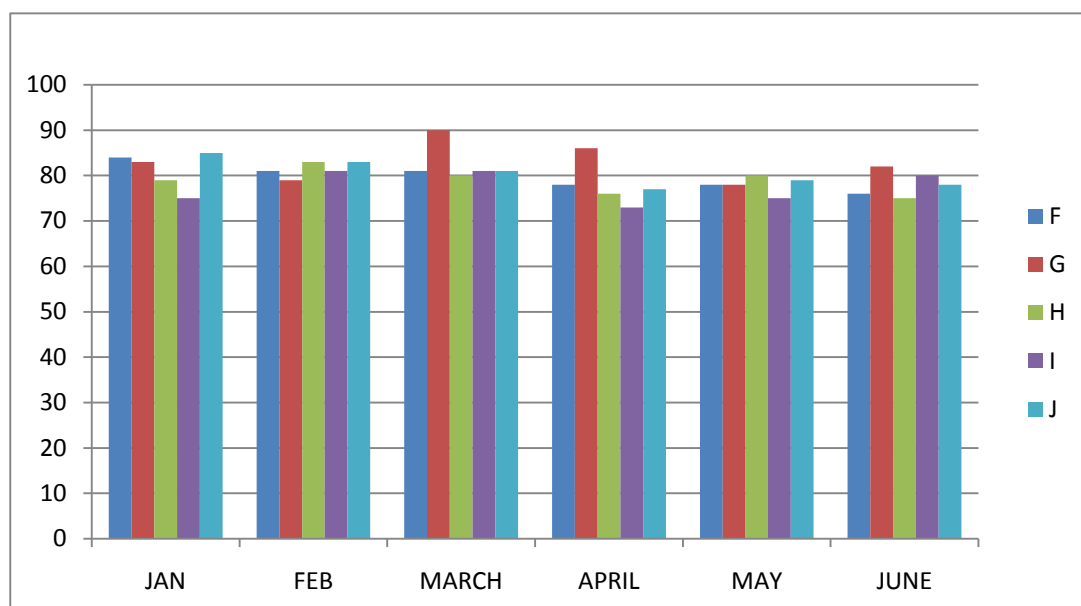


Figure 4.5: Present Attendance Average in Percentage

Source: School Feeding Research, 2019

From the tables and figures above the researcher wind up that number of children registered in schools with feeding program was high as judged against those schools with no feeding program. The attendance was found to be good in schools providing food as compared to schools which do not provide food. The lowest average percent of schools without feeding program was 78, while the lowest average percent of attendance to schools with feeding program was 94.7.

Furthermore, the highest average percent of attendance to schools without feeding program was 81, while, attendance to those schools with feeding program were 97 percent. This could have been the result of school feeding program as Levinger (1989) noted that School Feeding makes difference in attendance of children to schools. This is in agreement with a study carried out in Ethiopia where there was a great raise in enrollment; attendance and decrease of withdraw since 1998 when World Food Program (WFP) started school feeding program activities.

The same results were obtained in Tanzania where the poorest twenty regions where the program successful boosted enrollment, attendance and reduced students drop outs (WFP 2001). From researcher checklist students were asked to whether school feeding program motivates them to attend schools, the findings also revealed that 79% of the respondent students consent that provision of food to school is one of the factor which motivate them to attend schools. The increased attendance in school has positive impact to students' academic performance. Therefore, this proves clearly that School Feeding Program have positive impact to students' attendance. This concurs with Bundy et al (2009) who explained that school feed can be powerful incentive to boost school attendance.

4.4 Factors that affect School Feeding Program

4.4.1 Problems Affecting School Feeding Program

The researcher sought to know factors that affect school feeding program and find out opportunities that are available to mitigate those problems.

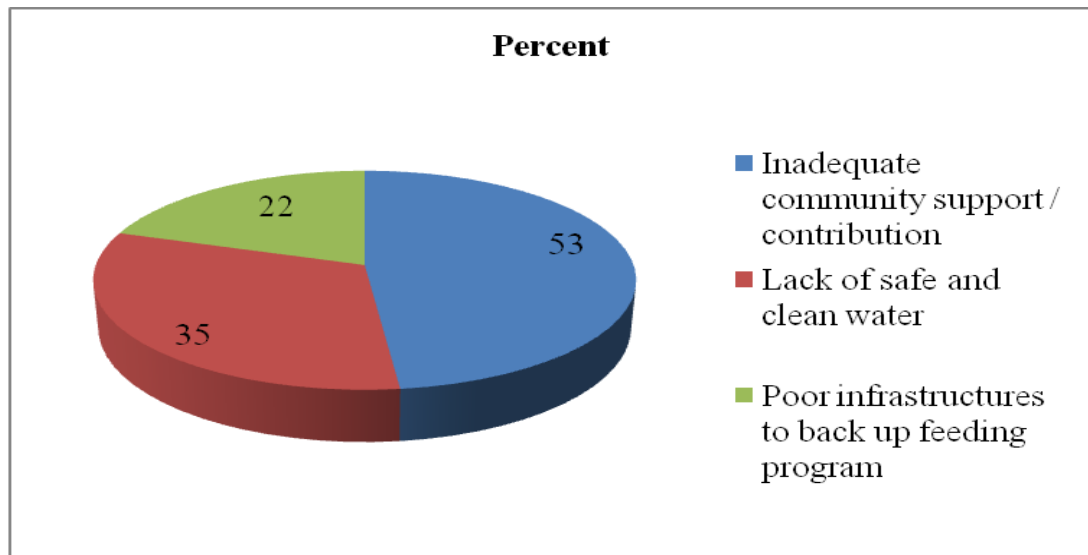


Figure 4.6: Factors Affecting Feeding Program

Out of all visited schools with Feeding program 53% identified that inadequate community contribution to support school feeding is a barrier to the effective execution and sustaining provision of food to school. 35% of the respondents claimed that lack of clean and safe water is a problem to sustain school feeding and the rest 22% of respondent identified that poor infrastructures in schools are a challenge to school feeding program.

4.4.2 Inadequate Community Contribution

From the findings it was revealed that community members have roles in supporting school feeding program. This is done to ensure that community members play part in the program. The agreement was that community members are responsible to contribute money to buy salts, pay cooks and watchmen. Furthermore, they are responsible for building and maintaining kitchen and stores. Despite the fact that community members are responsible to contribute material and non-material items to support school feeding program, this study found that 80% of cooks in all visited

schools are not paid their salaries as per agreement. This is because contributions are not collected and reach school authorities in time. The responsibility of collecting the money for paying cooks and guards is vested to village government office.

Head teachers commented that some parents are not cooperative to allow smooth running of school feeding program. They further said that some parents don't give their children food for the reason that they will eat at schools. This has negative impact to the growth of a child, currently the food is not provided for all five school days instead food is offered for four days a week; The agreement is that parents need to contribute food to feed children one day per week, this is one of the strategy laid down by private donor as a strategy to allow community own this program and avail them continue even after donor phasing out. On their side teachers noted that the challenges they face in sustaining the feeding program in their schools include;

- i. Some parents refused to offer children food at home hoping that they will eat at schools
- ii. Lack of facilities, some schools lack proper facilities for the smooth implementation of the School Feeding Program.

While interviewed one of the cook claimed that she had not been paid for four months though she is on job. The researcher probe on how she survived without receiving her salary and response given was not clearly stated, she argued that sometimes she used to borrow money from teachers within the school with a hope to repay when receiving salary. In regards to preparation of food the respondent cooks indicated that they bump into problems like; inadequate food material due to little contribution from parents, energy serving stoves are too smoky hence they use three

stone stove which consume many firewood. They further claimed that their wage is too low as compared to the job they do. The pictures number 01 and 02 in the Appendix VI illustrates the situation regarding stoves and firewood consumptions.

Researcher found that community members are not working very close with school authorities to improve or maintain kitchen and stores. This resulted to some schools make use of the Head teachers office or staff offices to keep food. From the pictures3 and 04 in appendix VI community members failed to repair the kitchen as observed by researcher in one of the visited schools under study; hence cooks are working in a very risky situation. The kitchen wall is about to fall down and no action is taken to rescue. This is not only dangerous to the cooks but also to students who were found moving around the kitchen.

4.4.3 Lack of Safe and Clean Water

The researcher was very interested to know the sources of water used for cooking food in schools. The findings revealed that all school visited with feeding program are not served with piped water instead they make use of water from unprotected well and Lake Victoria. Responses from respondents identified that lack of safe and clean water within school compound is a barrier to the effective execution of the program. Researcher found that water collection in all visited schools is a duty of students themselves. There is a duty roster where each class has a day to collect water for cooking food at school.

Investigator was also interested to recognize if there is a container for storing water in schools. Through interview and observation it was found that no school among all

schools visited had a container for storing water. Instead researcher found uncontrolled tins and buckets brought by students themselves are used to store water in schools. The pictures number 03 and 04 in appendix VII. Present what is exactly practiced in all visited schools under study. From the pictures 04 and 05 in the appendix VII, the situation in these schools is very terrible; there is limited knowledge on how these tins and buckets are used and kept. There is a limitation of safety assurance and cleanliness on water collected ready for use in schools. Worse enough there is no practice in place to treat drinking water in schools. Students were observed drinking untreated water and were more comfortable as they claimed that they have no other alternative.

4.4.4 Poor Infrastructure to Backup School Feeding

The research found that poor infrastructures are one among the problems facing proper implementation of school feeding program. Researcher was interested to know if infrastructures like cooking utensils, eating utensils, cooking stoves (energy servings), stores, kitchen, water supply, toilets, dining halls, hand washing facilities and the like are in place to back up the program. The findings revealed that all schools visited had limited hand washing facilities to avail students wash their hands before meal and after toilet. Through observations researcher found almost all schools visited during lunch time were using improper methods. Picture 3, 4 and 5: Showing types of kitchen from outside, firewood and water containers, in appendix VIII present the existing practices in schools.

4.5 Opportunities Available in Supporting School Feeding Program

The researcher was interested to identify the opportunities that are available in the

study areas which can be used to improve and sustaining school feeding program.

From the findings almost all respondents mentioned the following available:

- i. land for crop production in all sampled schools
- ii. Energetic community members
- iii. Parents
- iv. Chances of harvesting rainwater in all school visited under study
- v. Existing village government where School Development Committee fall in
- vi. Lake Victoria situated near to some schools just (300 – 500metres) which is a reliable source of water.

Out of all respondent students, 95% argued that schools have enough land which can be used to grow various crops to supplement school feeding program. This proves that if school land is used properly will supplement to the feeding program. Researcher through checklist found that some schools used the school land to grow various crops such as green vegetables, maize, sorghum just to mention a few.

Through observation it has been revealed that majita A and mkirila B primary school managed to harvest crops from the school land. Murangi B primary school found harvested maize approximated to 30 bags. The school authority stated that they plan to use their crop for breakfast (porridge). Picture number 09 and 10: Showing Water harvesting and storage tank at Mkirira A Primary School and Maize storage at Murangi B Primary School in appendix IX represents what is happening in some of the schools which are good practice to be adopted by other schools.

4.5.1 Ways or Strategies to Address Problems Identified to Sustain School Feeding Program

The researcher also wanted to know how the identified troubles faced in supporting school feeding program could be addressed. Respondents indicated the following mechanisms:

- i. Community members need to be mobilized to understand their role in sustaining school feeding Program
- ii. Private donor (PCI) should make sure that there is availability of the adequate food in schools
- iii. All stakeholders must work together, parents, teachers, community members and leaders, government and private donors.
- iv. Parents should continue provide food to their children at home to complement the feeding program
- v. Government could expand the free primary education program to include school feeding program and take charge to employ cooks and guards.
- vi. Government or private donor could supply pipe water/ drill borehole / introduce rainwater harvesting to schools to ensure water availability. This will reduce chances for the eruption of diseases.
- vii. School authority need to improve kitchen and make use of constructed energy serving stoves to reduce the great consumptions of firewood.

CHAPTER FIVE

KEY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses of the key findings and makes conclusion and recommendations. The conclusion and recommendation are linked to objectives of the study as outlined on pages.

5.2 Summary of Findings

The study revealed that out of 108 primary schools in Musoma Rural District, only 73 schools (68%) had school feeding program. This indicates that 32% of the schools did not have a feeding program. All the head teachers verify that they have called parents meetings to provide awareness on the School Feeding Program. The sources of water used in schools for cooking are collected from the wells, Lake Victoria and dams, no school was found to serve piped water. This indicates that majority of the schools use untreated water and therefore is not safe and clean water.

All respondents indicated that cooks are employed for cooking and are paid by the village government through community contribution. The findings also indicated that children are served by cooks though through physical observation the researcher found children were serving themselves. The cooking and eating utensils are kept in the stores and all respondents from schools indicated that they use firewood traditional three stone stoves for cooking. The findings revealed that head teachers usually get together with teachers and talk about how to improve the implementation of School Feeding Program. They discussed issues like how food was arranged; need to improve services, hygiene plus sanitation. The majority had the views that the

gathering had positive impact in the School Feeding Program They also conveyed the feedback to the food supplier (Donor) Project Concern International.

From the findings 100% revealed that community do contribute to the school feeding program. They support the program through constructing and maintaining kitchen, stores, paying the cooks and guards, provide facilities like firewood, water collection though the findings indicated that students themselves bring firewood and they are responsible for water collection. The cooks showed that they were not trained; they used experience they had in food preparation. Many of them had been working in the station for 3 years. All cooks claimed that they are paid low wage compared to the service they offer and worse enough they are not paid in time.

From the results shows that the students' attendance in schools with feeding program was high compared to schools without feeding program for the period between Januarys to July 2018. This would have been the results of feeding program. Levinger (1989) indicated that School Feeding program make a diversity in enrollment and number of students present to school. As well he added that the program assists poor families by providing their students a good food every day and this keep family with food.

From the findings the highest attendance average to schools with feeding program was 97% while those without feeding program was 81%. This illustrate that feeding program is one of the issue that persuade the students' attendance. This correspond with Ahmed and Billah (1994) whose study indicated that in Bangladesh school feeding program increased students attendance by 20% versus a 2% in non-

participating schools. In the part of performance, the head teachers and teachers from schools with feed program verified that there had been increasing trends in students' academic performance in standard seven national examinations.

Nevertheless, the school performances were invariable and sometimes available in a low trend, but it was endorsed by other aspect like un conducive classrooms, books students' ratio, teachers' student ratio and family related issues. conversely schools not providing food had similar trends in performance and sometimes got in low average, this might be contributed by the absent of school feed program to maintain students attendance and increase concentration in class. This concurs with Mitchell et al, (1999) that starving children cannot concentrate in class.

All teachers from school with feeding program ranking provision of food to their schools as good as well as every interviewed Teacher say that effect of the feed program to students' academic performance as excellent. This implied to school feed program have a helpful effect on students' academic performance. This supported by the information that student concentration in class session before meal was poor as different to participation after meal where attention was excellent.

The comparison of schools without feeding and those without feeding program revealed that; those schools with feed program have done well than those schools that had none. The lowly mean used for the school which has a feed program was 33.4 while lowly mean to those schools without was 33. The top mean intended for the school with feed program was 59.2, while the highest mean for the schools without feed program was 40 percent. This clearly indicated that school feeding

program is among the cause that add to students' academic performance.

5.3 Conclusion

The study revealed that 68% of all primary schools in Musoma Rural District had a feeding program and 32% did not have feeding program. Parents attend meetings to build awareness about school feed program, whereby each student was represented by his/her parent. In regard to water sources in schools, three sources were identified such as well, Lake Victoria and Dam. The study also concluded that the school feed program have positive effect on students' attendance and on students' academic performance.

Community members have a role to support school feeding program by constructing and maintaining kitchen, stores, paying cooks and guards and offering eating utensils, collecting firewood and water. Parents understand that the program had helped their children and mentioned the following merits;

- i. Offer good base for concentration on studies
- ii. Reduction of short term hunger among students in school
- iii. Improve their health status
- iv. Reduced family budget
- v. Increased time for learning (prolonged time for studies)

This study concluded that the School Feeding Program had improved the students' school attendance and enrollment. Furthermore, the school feeding program improved significantly the students' academic performance. The opportunities that were identified includes; available land for crop production in all sampled schools,

available energetic community members, there is parents, there is chances of harvesting rainwater in all school visited under study, there is existing village government where School Development Committee fall in and there is Lake Victoria situated near to some schools just (300 – 500metres) which is a reliable source of water. Also the study revealed the methods to solve the problems which includes;

- i. Community members need to be mobilized to understand their role in sustaining school feeding
- ii. Private donor (PCI) have to ensure availability of the sufficient food in schools
- iii. All stakeholders must work together, parents, teachers, community members, government and private donors.
- iv. Parents should continue feeding their children at home to complement the feeding program
- v. They wish Government could expand the free primary education program to include school feeding program and take charge to employ cooks and guards.
- vi. They wish the government or private donor could supply pipe water/ drill borehole/introduce rainwater harvesting to schools to ensure water availability. This will reduce chances for the eruption of diseases.
- vii. They wish that school authority need to improve kitchen and make use of constructed energy serving stoves to reduce the great consumptions of firewood.

According to Mayer (1989), alleviating hunger in schools supports students to achieve well in their examinations. This correspond to the results of this study where the performance of students in schools with feeding program is better than those

students who study in schools without feeding program. In the underprivileged part of the world, school feed program can increase primary school enrollment and attendance in a year (Sessional Paper, 2005). This is shown in the study where the schools which have a feed program have well attendance and students' academic performance than those schools which had none.

5.4 Recommendations

From the results, the researcher would like to make the following recommendations;

- i. The District authority in collaboration with community members should come up with solutions to reduce short term hunger to students in schools which do not have feeding program this would help students' to perform better on their studies.
- ii. Parents meetings should be held often to ensure sustainability of feeding program in schools.
- iii. Schools should use their land for growing maize and sorghum and use the yield for supplementing feeding program through initiating breakfast (Porridge).
- iv. The collected water need to be stored in a specified container and if possible government should supply water to those schools having feeding program through borehole, rain water harvesting or tap water.
- v. School authorities should make sure that; hand washing facilities are in place to allow students wash their hands before meal and after toilets to reduce chances of eruption of diseases.
- vi. The energy saving stoves should be in place to reduce high consumption of

firewood.

- vii. Finally, all stakeholders are encouraged to work together for the wellbeing of the school feeding program in these schools. This will ensure continuity of the program even after the donor phasing out.

5.5 Recommendation for Further Study

In line to the results and the conclusion in this study, the investigator recommends that the further studies should be done on the Hygiene and sanitation practices in schools having feeding program.

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APPENDICES

THE OPEN UNIVERSITY OF TANZANIA

Appendix I: Head Teacher Questionnaire

Introduction:

Dear respondent, my name is Boniface Andrea a student at Open University Tanzania pursuing Master of Arts in Monitoring and Evaluation (M&E). I am now doing an academic research paper as part of fulfilling requirements for the award of the Master degree. I am now requesting you to take part in this research. Please respond to each question to the best of your knowledge by ticking the appropriate response in the spaces provided. Your responses will be completely confidential and be used by the researcher for the purpose of this study only. Therefore, do not write your name anywhere in this questionnaire. You are kindly requested to respond to all items applicable to you.

Name of the school/School code..... Date

1. Sex

1 = Male 2 = Female ()

2. Age

1 = 25 -30 2 = 31 -40 3 = 41 -50 4 = 51 and above ()

3. Teaching Experience

3 = 11 – 15

0 = less than a year 1 = 1-5 years 2 = 6 -10 years years

4 = 15 years and above ()

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

3 = 11 - 15

0 = less than a year 1 = 1-5 years 2 = 6 -10 years years

4 = 15 years and above ()

5. How many teachers do you have in your school

Men.....Women.....Total....

6. Do you have a program for feeding children in the school?

1 = Yes 2 = No ()

7. When was that program started in your school?

8. What promoted the need to have feeding children in school program?

.....
.....

9. Did you call a parent meeting to create awareness as concerns with the program of feeding children in school feeding?

1 = Yes 2 = No ()

10. If yes, how many parents in average attended the last meeting?

Men.....Women.....Total.....

11. Who sponsor the program of feeding children in school?

.....
.....

12. Do you receive any contribution from the community as far as program of feeding children in school is concerned?

1 = Yes 2 = No ()

If yes, what are the contributions obtained from the community members

.....

13. For how long has your school been having the feeding program Number of years.....

14. What type of the food does the school offer

- 1 = Porridge 2 = Snacks 3 = Fruits 4. Lunch
5 = Porridge and Lunch ()

15. Who cook the food

- 1 = Employed persons 2 = Teachers 3 = Community members ()

16. If employed cook, who pay his / her salary

.....

If the school what is the source of the fund.....

17. Who serves the children with food?

- 1 = Cook 2 = Teachers ()

18. Where are cooking equipment's (utensils) kept?

- 1 = Head teachers office 2 = School store 3 = Kitchen ()

19. What type of fuel does the school use in cooking

- 1 = Paraffin 2 = Electricity 3 = Charcoal 4 = Firewood ()

20. How were the performance standard seven students for the last three years?

2018 - Number of students appeared in National examination

- Number of students scored the pass grade.....

- Number of students following secondary school education.....

2017 Number of students appeared in National examination.....

- Number of students scored the pass grade.....

- Number of students following secondary school education.....

2016 Number of students appeared in National examination.....

- Number of students scored the pass grade.....

- Number of students following secondary school education.....

21. How was the general performance (students promotion from one grade to another) of students

Year	Grade /	Total number	Boys	Girls	Number of students promoted	
	Standard	of students			to the next grade	
					Boys	Girls
2018	1					
	2					
	3					
	4					
	5					
	6					
2017	1					
	2					
	3					
	4					
	5					
	6					
2016	1					
	2					
	3					
	4					
	5					
	6					

22. What problem do you face in sustaining the program of feeding children in school?.....

23. How can the problem you face in sustaining the school feeding program addressed

.....

Thank you for your contribution and cooperation

Appendix ii: Teachers Questionnaire (teacher responsible for feeding program)

Introduction:

Dear respondent, my name is Boniface Andrea a second year student at Open University Tanzania pursuing Master of Arts in Monitoring and Evaluation (M&E). I am now doing an academic research paper as part of fulfilling requirements for the award of the Master degree. I am now requesting you to take part in this research.

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

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

School name / code number.....

Date.....

Male		()
0	-40	-50
Age Experience		4 = 51 and above ()
less than a year	1 = 1-5 years	2 = 6 -10 years
3 years and above	3 = 11 – 15 years	()

many years have you been to the present station?

less than a year 1 = 1-5 years 2 = 6-10 years 3 = 11-15 years
 4 = 16 years and above ()

feeding experience

less than a year 1 = 1-5 years 2 = 6-10 years 3 = 11-15 years
 4 = 16 years and above ()

6. How long have you been responsible for feeding program at this school.....

7. State the impact of feeding program in your school

.....

8. Do you normally meet with the head teacher or other teachers to discuss how to make the school feeding program better?

1 = yes 2 = No ()

9. If yes, how often

1 = occasionally 2 = often 3 = very often ()

10. What are some of the issues you discuss in your meetings

.....

.....

11. Do the meetings have any impact towards the feeding program

1 = Yes 2 = No ()

12. If yes above, how?

.....

.....

13. How can you grade your school feeding program

1 = Very good 2 = good 3 = fair 4 = poor ()

14. What the effects of feeding program on attendance and performance

1 = Very good 2 = good 3 = fair 4 = poor ()

15. Comment children participation in activities before and after meals

.....

16. What is your role as far as feeding program is concerned

.....

17. Comment on the performance of children in your school

.....

.....

18. What challenges do you face in sustaining the feeding program in your school

.....

.....

19. What are opportunities are available to solve the challenges of sustaining school feeding

.....

.....

20. What do you think can be done to improve school feeding program in your school

.....

Thank you for your contribution and cooperation.

Appendix iii: Interview Schedule for parents

Introduction:

My name is Boniface Andrea a second year student at Open University Tanzania pursuing Master of Arts in Monitoring and evaluation (M&E). I am now doing an academic research paper as part of fulfilling requirements for the award of the Master degree. I am now requesting you to take part in this research.

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

1. Sex
2. Age
3. Marital status
4. Do you have a child who study in this school
5. If yes, which grade is he / she (take the youngest child of you only)
6. Do your children go to school
7. Do your children take their lunch in school
8. If yes, do they bring complains on anything about the food
9. Do you support school feeding program
10. If yes, how
11. Do you encourage your child to eat at school
12. Do you go to school to discuss nutritional values of school feeding program
13. Are you charged any amount of money towards the school feeding program
14. If yes, how much
15. Has the performance of your children improved due to school feeding

program

16. Does your child like the food given at school
17. If yes / No why.....
18. How many meals does the program offer daily
19. Do you know how the school menu is
20. What role do you play in support of the feeding program
21. Explain on how your child benefit from the school feeding program
22. What are the advantages of school feeding program
23. How has been the performance of your child since he / she joined the school
24. Is there any problem with the school feeding program
25. Which opinion would you give to improve school feeding program

Thank you

Appendix iv: Interview Schedule for Program implementers (PCI)

Introduction:

Dear respondent, my name is Boniface Andrea a second year student at Open University Tanzania pursuing Master of Arts in Monitoring and Evaluation (M&E). I am now doing an academic research paper as part of fulfilling requirements for the award of the Master degree. I am now requesting you to take part in this research. Please respond to each questing to the best of your knowledge by ticking the appropriate response in the spaces provided. Your responses will be completely confidential and be used by the researcher for the purpose of this study only.

1. Sex
2. Marital status
3. How many years have you been working with this organization
4. What is your position in the organization
5. What is your role in relation to school feeding program
6. How many schools do you serve in your school feeding program
7. How do you fund your project (school feeding program)
8. Do you involve communities in the implantation of the program
9. If yes in what ways do they involved
10. How does school feeding affect children learning as you have observed since you started this project in relation to student performance
11. What are the problems faced by your organization in the implementation of this project
12. What are the opportunities available to sustain the project
13. What are the possible mitigation to those challenges

Through your own observation and experience what can you comment on this program

Thank you

Appendix v: Interview scheduled for District officers

Introduction:

Dear respondent, my name is Boniface Andrea a student at Open University Tanzania pursuing Master of Arts in Monitoring and Evaluation (M&E). I am now doing an academic research paper as part of fulfilling requirements for the award of the Master degree. I am now requesting you to take part in this research. Please respond to each question to the best of your knowledge by ticking the appropriate response in the spaces provided. Your responses will be completely confidential and be used by the researcher for the purpose of this study only.

Name of the officer / Code.....Date

1. Sex
2. Marital status
3. How many years have you been working in Musoma Rural district – education office?
4. What is your position in the District education office
5. What is your role in relation to school feeding program
6. How many schools are served with school feeding program
7. How do you fund your project (school feeding program) (*probe if their government fund*)
8. Do you involve communities in the implementation of the school feeding program
9. If yes in what ways do they involved
10. How does school feeding affect children learning as you have observed since you started this project in relation to student performance

11. What are the problems faced by your District in the implementation of this project
12. What are the opportunities available to sustain the project
13. What are the possible mitigation to those challenges
14. What are the future plans in regards to school feeding program in your district
15. Through your own observation and experience what can you comment on this program

Thank you

Appendix vi: Interview Schedule for Student

Introduction:

My name is Boniface Andrea a second year student at Open University Tanzania pursuing Master of Arts in Monitoring and evaluation (M&E). I am now doing an academic research paper as part of fulfilling requirements for the award of the Master degree. I am now requesting you to take part in this research. Please respond to each question to the best of your knowledge by ticking the appropriate response in the spaces provided. Your responses will be completely confidential and be used by the researcher for the purpose of this study only.

1. Sex
2. Age
3. Class
4. Do you take your lunch in school
5. If yes, do you bring complaints on anything about the food to your parent/teacher
6. Do you discuss nutritional values of school feeding program in your school?
7. Are you charged any amount of money towards the school feeding program
8. If yes, how much
9. Is your performance improved due to school feeding program
10. Did you like the food given at school
11. If yes / No why.....
12. How many meals does the program offer daily
13. Do you know how the school menu is
14. Explain on how you benefit from the school feeding program

15. How has been your performance since he / she joined the school
16. Is there any problem with the school feeding program
17. Which opinion would you give to improve school feeding program

THANK YOU

Appendix vii: Pictures

Picture number 01 and 02: Shows one of the school Kitchens where school children meals are prepared



Source: School Feeding Research, 2019

Picture 3, 4 and 5: Showing types of kitchen from outside, firewood and water containers.



Source: School Feeding Research, 2019

Picture Number 06, 07 and 08: Showing students washing their hands before and after meals



Source: School Feeding Research, 2019

Picture 8

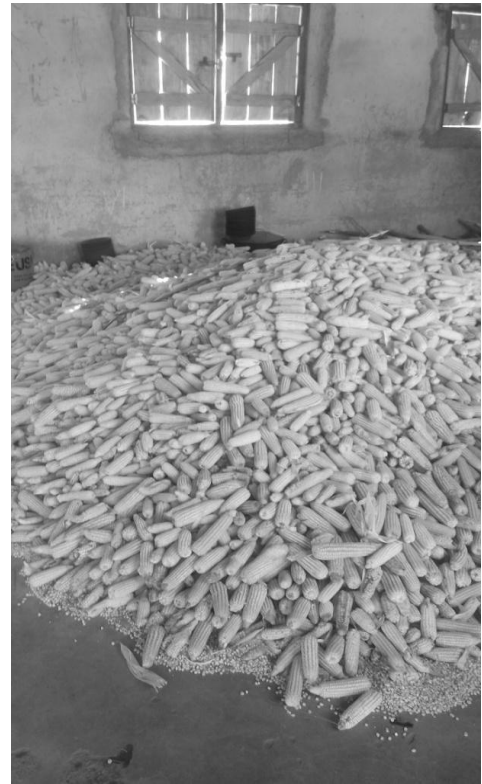


Source: School Feeding Research, 2019

Picture number 09 and 10: Showing Water harvesting and storage tank at Mkirira A Primary School and Maize storage at Murangi B Primary School



Source: School Feeding Research, 2019



Appendix viii: The Research Budget

SN.	ACTIVITY	DISTRIPTION	AMOUNT (TSHS)
1	Preparation		
	Introduction to the District and organization authority	Fare 50,000 X 2 (up and down)	100,000
	Tools preparation and testing	Printing & copy, transport to the schools for testing tools	200,000
	Photocopying	1200 copies X 100	120,000
	Printing	350 pgs 1000@page	350,000
	Physical visit to the identified schools	40,000@ school x 6 schools	240,000
2	Subsistence allowance	20 working days x 50,000	1,000,000
3	Transport to the field	40,000 for one school X 6 schools	240,000
4	Communication (Phone, email)	Lamp sum	100,000
5	Contingency	5% of the total budget	157,500
6	Reporting	Printing and binding	400,000
7	TOTAL		2,907,500