

# **RESEARCH ARTICLE**

## **ASSESSMENT OF MANAGEMENT OF FEEDING PROGRAM IN PRE SCHOOLS**

**BY**

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**Research Article**

**ASSESSMENT OF MANAGEMENT OF FEEDING PROGRAM IN PRE-SCHOOLS**

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**Abstract**

Management of feeding program is a crucial aspect of implementation of pre-school curriculum in pre-schools and if it is done keenly and in a proper way, then both enrolment and academic achievement of pupils will be enhanced. Despite the impotence that may accrue from proper management of feeding programs, many stakeholders in pre-schools don't utilize it effectively leading to poor academic achievement of pupils in Pre-schools. The purpose of the study was to assess the management of feeding program in pre-schools. It was based on descriptive survey research design. It consisted of one (1) Sub-County Program Officer, 78 Head teachers' and 156 preschool teachers. Saturated sampling technique was used to select one (1) Sub-County Program Officer and simple random sampling technique used to select a sample size of 26 pre-school head teachers and 52 pre-school teachers. Data was collected using; questionnaires and interview schedule. The study found out that; administration of feeding program in pre-schools was low and challenged with inadequate finances to facilitate provision of required facilities, clean water, and balanced nutritious diet. The study recommended that; The Ministry of Education in partnership with County Governments should instate proper policies to facilitate establishment of proper feeding program in pre-school in order to promote both enrolment and academic achievement of pupils in pre-schools.

**Keywords:** Assessment, Management, Feeding Program.

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**INTRODUCTION**

**Management of Feeding Program in Pre-Schools**

Feeding program in Pre-schools is the supply or provision of food in a recommended quality and quantity at the right time in pre-schools. Food supplied or provided should be of a balanced diet for growth, repair and body protection. The feeds should include; carbohydrates, proteins, fats, minerals and vitamins (UNESCO, 2005). These have direct effect on both enrolment and academic achievement of pupils in pre-schools (Finan, 2010). The United Nations Declaration on the Rights of Child and philosophies of World Health Organization, UNICEF and UNESCO (2005) emphasized that it is the task of those working with children whether they are parents, teachers or members of the community to provide medical services, food and education during important and formative years of early childhood. Feeding programs are factors of utmost significance to the child's total growth and development, and the general provision of adequate environment. World Bank (2011) states that, Feeding Program contributes to good children performance and it is also a human right. She also states that there is input of Education links between hunger and learning. In her study she found that hungry children could not concentrate in learning process. Aborti (2013) says that, expectation of school feeding program should have an impact on pre-school children on enrolment, attendance, retention and sustainability. Ryan (2003) states that in Kenya, feeding program for pre-school is the availability of subsidized school meals that will increase school enrollment. Adelman (2008) in his study says that, households usually compare the size of the transfer relative to the size of the cost-benefit gap and these comparisons ultimately determine the magnitude of the increase in the enrolment.

Bowlby (1988) investigated food quantity and quality in pre-schools and recommended that, children should be given right nutrients to enhance their growth, development and survival in the community. He also argued that the frequency of the meals should be noted. Food should be served regularly and schools should set good designs and programs to manage this. He also said that there should be a department to deal with feeding program within the school. Ann (2010) confirms that, human body functions best when supplemented by the right kinds of food in the correct proportions. Food is a basic need and a right for survival for all humanity especially for children whose rights are to enjoy the highest attainable standard of health, feeding and education, Food is a basic biological need. Maslow (1911) states that, human beings have a hierarchy of needs ranging from lower level needs of food for survival and safety to higher needs. So this should be provided before we can ask children to be motivated to learn. Nutrients in food keep the body healthy. The body should receive enough of each nutrient because feeds also vary in their chemical composition.

**Objectives of the Study**

The study therefore aimed at assessing management of pre-school feeding program in Suna East Sub-County, Kenya.

**MATERIALS AND METHODS**

**Research Design**

The study used a descriptive survey research design. Descriptive survey research design was chosen because it is appropriate for educational research fact finding as it yields a great deal of information, which is accurate. It enables the researcher to gather data at a particular point in time and use it to describe the existing condition of nature (Cohen, Marion

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and Marizon, 2002). The study aimed at gathering or collecting information and characteristics that are observable in the assessment of management of feeding program in Pre-Schools in Suna East Sub-County.

## METHODOLOGY

Population of the study comprised of one (1) Sub-County Program Officer, 78 Head teachers and 156 preschool teachers. Saturated sampling technique was used to select one (1) Sub-County Program Officer and simple random sampling technique used to select a sample size of 26 pre-school head teachers and 52 pre-school teachers (33% of the study population). This is a convenient size for a good survey (Mugenda and Mugenda, 2003). Simple random sampling technique was used because it gives equal opportunities to all members of the target population as selected (Borg and Gall 2007). The instruments used to collect data were questionnaires and interview schedule. Primary data was collected using both open and closed ended questions on rating scales, which addressed the objective of the study.

### Reliability and Validity of Instruments

#### Validity of the Instrument

Validity refers to the degree to which the study instruments accurately reflect specific concepts that the researcher is attempting to measure. For validity of the research instruments to be determined, experts from the School of Education of Rongo University examined the content of the instruments. Recommended improvements and alterations on the items of the research instruments were adjusted as suggested by the experts before the instruments were finally taken into the field. This method of establishing validity of the instruments is recommended (Joppe, 2002; Creswell and Miller, 2000).

#### Reliability

To ensure reliability of the research instruments, a pilot study was carried out in three (3) schools, 3 head teachers and 6 pre-school teachers (12% of the study sample) were selected randomly and were excluded from the study. The instruments were self-administered and the process repeated after a period of two weeks. Pearson product moment correlation coefficient was used to determine the reliability of the questionnaires at the set alpha level of significance;  $\alpha=0.05$ . The results of analysis obtained were; 0.78 for the pre-school head teachers' questionnaires and 0.75 for the pre-school teachers' questionnaires, which were considered reliable (Kathuri and Pals, 1993).

#### Data Collection Procedures

Before data collection, the researcher secured a research permit from the National Council for Science, Technology and Innovation (NACOSTI) through the Director, Post Graduate Studies of Rongo University. Thereafter, the researcher informed the County Director of Education and County Commissioner by presenting a letter of research authorization from NACOSTI. The researcher then informed the Suna East Sub-County Director of Education and ECDE Program Officer about the research study through a letter. This facilitated the researcher in notifying various Head teachers of pre-schools on the reasons for the study. Therefore, letters informing the pre-

school head teachers on the research study were delivered to sampled head teachers two weeks before the researcher visited the pre-schools for data collection. For effective administration of pre-school teachers' questionnaires, the researcher made personal visit(s) to sampled Pre-Schools and gave teachers relevant instructions on how to fill in the questionnaires. The researcher administered questionnaires to teachers and requested them to carefully fill in the questionnaires. The researcher gave them time to respond to the questions and finally collected the questionnaires before leaving for another station to avoid loss of questionnaires.

### Methods of Data Analysis

Quantitative data from close-ended questions were analyzed using descriptive statistics in form of frequency counts, means and percentages (Chamber and Skinner 2003) while *t* test was used to inferentially analyze the statistical significance difference between the rating of pre-school head teachers and pre-school teachers. However, qualitative responses to the open-ended questions, were organized, categorized and reported based on emergent themes and the analyzed data presented in tables.

## RESULTS AND DISCUSSIONS

### Management of Pre-School Feeding Program

The study sought to establish the extent and nature of administration of pre-schools' feeding program in Suna East Sub County, Migori County, Kenya. To establish the extent of administration of feeding program in pre-schools, head teachers and pre-school teachers were first required to indicate whether their schools had well-established pre-school feeding program or not. This was a precursor to understand the extent of administration of pre-school feeding program in Pre-schools. The results of analysis are shown in Table 1.

**Table 1. Response of Head Teachers and Pre-School Teachers on Availability of Well Established Feeding Program**

Respondent		Count	Do you have a well-established feeding program in your school?		Total
			Yes	No	
			%	%	
Head-teacher	Count	5	17		22
	%	22.7	77.3		100.0
Pre-school Teacher	Count	10	25		35
	%	28.6	71.4		100.0
Total	Count	15	42		57
	%	26.3	73.7		100.0

The results in Table 1 indicate that majority of pre-schools did not have well-established feeding program as affirmed by a total of 42 (73.7%) head teachers and pre-school teachers while a total of 15 (26.3%) head teachers and pre-school teachers perceived the feeding program in the pre-schools to be well-established. This suggests that pre-school feeding program in Suna East Sub-County could be locally organized feeding program by the parents and teachers just to sustain pre-school children during their stay in schools. Thus, the feeding program in pre-schools may not provide the recommended nutritional content and value to pre-school children. This concurs with World Bank (2011) findings in Kenya which points out that; micronutrient deficiencies are high, particularly iron and vitamin A, with 76% and 74% of pre-school children deficient in vitamin A and iron, respectively. The findings are further supported by responses from head teachers when they

explained that, they only provide white porridge to pre-school children, which according to them was not commensurate to well-established feeding program.

Moreover, these findings were confirmed by Sub-County Program Officer who reiterated in his response in an interview conducted by the researcher saying;

*“The national government does not have a pre-school feeding program policy. However, due to the parental responsibility and concern to promote education of children, parents may decide to pull resources together in order to have their children get meals of any kind to sustain them at school. As a result, majority of pre-schools in this Sub-County only serve white porridge to the pre-school going children at mid-morning.”*

The findings were also confirmed by UNESCO (2005) which reports that roughly, 80 percent of Kenyans live in rural areas and earn their living from farming. UNESCO further points out that poor land quality and chronic water shortages have put the country in a constant state of food insecurity. In the same way, the 15(26.3%) head teachers and pre-school teachers who indicated affirmation to well-established feeding program stated that pre-school children were fed mainly on porridge, ‘Githeri,’ and in some few cases ‘ugali’ was provided. The head teachers and pre-school teachers further reported that they served the meals in an open air or kitchen in the mid-morning. This implies that, the pre-schools could be lacking modern dining facilities and proper infrastructure to promote good health and hygiene to the pre-school children. These findings are in agreement with Githuku (2015) who concludes that, schools offer onsite meals where children are fed with food, mainly lunch while in school. Githuku adds that this type of school feeding program affects enrolment of children in pre-schools positively to a great extent. Similarly, Sara (2017) reports that among the sampled schools, a half of the schools were offering school meals in classroom, one quarter offered meals in the kitchen and the other quarter offered meals in an open field. This concurs with a study by Caroline (2016) who states that most of the pre-schools in Kenya offer feeding program without any adequate funding to support provision of facilities such as kitchen and dining room.

Consequently, to establish the extent of administration of feeding program in the pre-schools, head teachers and pre-school teachers in the sampled pre-schools were asked to rate on a 5-points Likert Scale the degree to which they perceived the administration of feeding program in their schools, using the responses;

1= Very Low, 2= Low, 3= Moderate, 4= High and 5= Very High.

The responses were then analyzed using an Independent two sample t test to determine if a significant difference existed between the mean rating of head teachers and pre-school teachers on the administration of feeding program in the pre-schools and the results were presented in Table 2.

Table 2 on the Independent t-test result,  $t(55) = -1.102$ ,  $p > .05$ , indicate that, there was no statistically significant difference between the rating of head teachers ( $M=1.87$ ,  $SD=.456$ ) and the rating of pre-school teachers ( $M=2.03$ ,  $SD=.608$ ), since the  $p$ -value= .276 is greater than the chosen level of significance;  $\alpha=.05$ . This suggests that the feeding program in the pre-schools in Suna East Sub-County has been implemented to a low extent. Equally, an interview with Sub-County Program Officer revealed that administration of feeding program was to a low extent since less than half of the pre-schools offered school-based feeding program. The Sub-County Program Officer had this to say;

*“Feeding program in pre-schools in Suna East Sub-County has not picked up in majority of the pre-schools because it relies heavily on contributions and food supplies from parents or guardians. Approximately less than one-third of the pre-schools have tried to establish feeding in their schools, however, the homegrown feeding programs still face several challenges that make it impossible for such program to be established in most pre-schools.”*

These findings are in line with the observation of Aila (2012) in his study on school feeding program in Kibera Constituency in Kenya in which he points out that, school feeding program is yet to take route fully in all basic education learning institutions. This, however, is not consistent with the UN Declaration of the Rights of Child and philosophies of WHO, UNICEF and UNESCO (2011) which emphasizes that, it is the task of those working with children to provide health, food and education during important and formative years of early childhood. To determine the nature of administration of pre-school feeding program in Suna East Sub-County, head teachers and pre-school teachers were asked to rate the status of finances, food supply, balanced diet, time management, availability of facilities, sustainability, and academic performance, on administration of feeding program. The responses of twenty-two head teachers and thirty-five pre-school teachers, who confirmed that they had well-established feeding program in their schools, were analyzed in form of frequencies and percentages, and results presented in Table 3.

Table 3 indicates that, majority of both head teachers 14(63.6%) and pre-school teachers 18(51.4%) rated that finances were fairly mobilized to support feeding program while minority of both head teachers 4(18.2%) and pre-school teachers 7(20%) pointed out that mobilization of finances was very good. Yet, still 4(18.2%) head teachers and 10 (28.6%) pre-school teachers rated status of financial mobilization as poor. This implies that majority of pre-school parents in Suna East Sub-County partially contributed finances to support feeding program and therefore, may have led to ineffective administration. These findings on the status of financial mobilization to support feeding program are consistent with findings of Karibu (2000) who points out that pre-school parents in Imenti South Sub-County partially contributed finances to support pre-school feeding program.

**Table 2. Extent of Administration of Feeding Program in Pre-Schools**

	Res	Mean	SD	t-test output
What is the extent of administration of feeding program in your center?	H/T	1.87	.456	$t(55)=-1.102$ , $p=.276$
	PS/T	2.03	.608	

**Interpretation Key:** 1.00-1.44 = Very Low Extent; 1.45-2.44 = Low Extent; 2.45-3.44=Moderate Extent; 3.45-4.44= High Extent; 4.45-5.00= Very High

**Table 3. Status of Administration on Aspects of Feeding Program in Pre-Schools**

Aspect	Res	Poorly	Fairly	Good	Very Good	Excellent
Finance	H/T	4(18.2%)	14(63.6%)		4(18.2%)	
	PS/T	10(28.6%)	18(51.4%)		7(20%)	
Food Supply	H/T	18(81.8%)	4(18.2%)			
	PS/T	21(60%)	10(28.6%)	4(11.4%)		
Balanced Diet	H/T	4(18.2%)	14(63.6%)	4(18.2%)		
	PS/T	6(17.2%)	25(71.4%)		4(11.4%)	
Time Management	H/T		4(18.2%)	10(45.4%)	4(18.2%)	4(18.2%)
	PS/T	3(8.6%)	11(31.4%)	14(40%)		7(20%)
Facilities	H/T	18(81.8%)	4(18.2%)			
	PS/T	25(71.4%)	10(28.6%)			
Sustainability	H/T		14(63.6%)	8(36.4%)		
	PS/T	7(20%)	21(60%)	7(20%)		
Academic Performance	H/T		5(22.7%)	17(77.3%)		
	PS/T			26(74.3%)	9(25.7%)	

This affects teaching and learning negatively hence hindering implementation of the feeding program. The Sub-County Program Officer in an interview also pointed out in support to these findings while reiterating that funding was a major challenge and recommended that the County governments should make efforts to explore opportunities of donors' support. He stated that;

*"I would recommend that Migori County Government supports pre-school feeding program to facilitate effective and efficient management. This is because parents in this Sub-County are poor, thus, may not have financial ability to support smooth running of feeding program in the Sub-County. Therefore, to realize the objectives of feeding program, County governments should fund such program."*

In addition, majority of both head teachers 18 (81.8%) and pre-school teachers 21 (60%) indicated that food was poorly supplied while minority of both head teachers 4 (18.2%) and pre-school teachers 14 (40%) indicated that food was either fairly or well supplied. The findings suggest that the procurement strategies adopted in securing food for the program were inconsistent and unreliable. These findings were inconsistent with Otieno's (2014) who indicates that the core objective of feeding activities is to provide supplements to pre-primary and primary school children in order to help boost their health and nutritional status. Nevertheless, Wambua (2008) observes that, in certain cases the government may wish to consider a mixed model of implementation of feeding program, where the state provides a basic food basket to complement the food supply by parents. This way, Brinkman felt that food supply could be protected, and minimum nutritional and quality standards maintained. These poor conditions may irreversibly stunt the mental and physical development of young children, resulting in wasted potentials and lifelong difficulties (Galal, 2005). On balanced diet, majority of both head teachers 14 (63.6%) and pre-school teachers 25 (71.4%) pointed out that balanced diet was fairly provided while minority of both head teachers 4 (18.2%) and pre-school teachers 6 (17.2%) pointed out that provision of balanced diet was poor. However, 4 (18.2%) head teachers and 4 (11.4%) pre-school teachers rated provision of balanced diet as good and very good respectively. As a result, it suggests that the pre-schools did not provide good nutrition that would otherwise play a crucial role in rapid brain development of pre-school children. The fair balance in diet is also an indication of insufficient nutritional provision to the pre-school children and may have led to decline in enrolment of pre-school children. However, according to UNESCO (2005) program division report, children who do not receive adequate health, nutrition,

early stimulation, learning opportunities, care and protection, all identified as elements of 'nurturing care', tend to have lowered cognitive, language and psychosocial outcomes as well as executive functioning, which translates to lowered academic achievement in primary school and ultimately, dropping out of school. Hence, resulting to low enrolment of pupils as witnessed in Suna East Sub-County pre-schools.

On the aspect of time management, Table 3 shows that majority of both head teachers 18 (81.8%) and pre-school teachers 21(60%) rated time management to be good or better while minority of both head teachers 4(18.2%) and pre-school teachers 14(40%) pointed out that time management was fair or poor. This meant that there was relatively good time management in the administration of feeding program. Asiago and Akello (2014) however, established that school feeding program is perceived as a burden to teachers, who have to teach and coordinate cooking and serving of meals, at the same time; thus, indicating challenges teachers face in the process of struggling with execution of duties. Therefore, a teacher is compelled by circumstances to miss some classes to ensure proper coordination of SFP; hence, affecting academic performance of pre-school children. Also, Table 3 shows that majority of both head teachers 18 (81.8%) and pre-school teachers 25 (71.4%) pointed out that availability of facilities was poor while minority of both head teachers 4 (18.2%) and pre-school teachers 10 (28.6%) pointed out that availability of facilities was fair. Consequently, revealing that the availability of facilities required for supporting feeding program in the pre-schools were poor. Finan (2010) concurs with these findings when he points out that certain financially strapped schools lack resources, hence this require families to contribute money, labour, water, and firewood to support school feeding program. On sustainability, Table 3 indicates that majority of both head teachers 22 (100%) and pre-school teachers 21 (60%) rated sustainability of feeding program as fair or well while minority of pre-school teachers 7 (20%) rated sustainability of feeding program as poor. These findings imply that sustainability of feeding program is still a challenge in the pre-schools. Githuku (2015) confirms by indicating that sustaining school feeding program faces numerous challenges including parents being unable to provide the required money, getting firewood and paying the cook. However, Espejo, Burbano, and Galliano, (2009) points out that linking school feeding to local agriculture has direct economic benefits and can potentially benefit the entire community. Espejo et al (2009) further explains that this linkage between local food production, purchase and school feeding can highly contribute to program sustainability. Lastly, on academic performance, majority of head teachers 17 (77.3%) and pre-school teachers 26 (74.3%)

rated academic performance as good. This suggests that the administration of pre-school feeding program positively enhanced academic performance of pre-school children. Yunusa (2012) notes that students who have feeding program have the potential for improving their performance because it enables them attend school regularly and study more effectively. Wambua (2008) in Mwala Division, Machakos County supports the findings by concluding that school-feeding program improves performance of pupils.

## Conclusion

Based on the findings, the study concludes that administration of feeding program in Suna East Sub-County pre-schools was low and challenged with inadequate finances to facilitate provision of required facilities, clean water, and balanced and nutritious diet.

## Recommendations

Study findings recommended that;

- i) The Ministry of Education in partnership with County Governments should instate proper policies to facilitate establishment of proper feeding program in pre-schools in order to promote both enrolment and academic achievement of pupils in pre-schools.
- ii) County government should allocate funds to support feeding program in pre-schools.
- iii) Sub-County Program Officers should conduct regular oversight on management of feeding program in order to monitor and evaluate progress towards the planned goal of improved enrolment.

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## Research Article

# Challenges in Feeding Program, Academic Achievement and Enrolment of Pre-School Children

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**Abstract:** Many countries in the world have organized pre-school feeding program through parents, religious institutions and women groups with an aim of maintaining and increasing both academic achievement and enrolment of pupils in Pre-schools. However, this has never fully succeeded in Suna East Sub- County, Migori County, Kenya. Statistics indicate that the dropout rate of enrolled preschool children increased as follows; 20% in 2017, 23% in 2018 and 25% in 2019. This has been accompanied by poor academic performance of pre-school children. Factors leading to this situation have not been established yet hence the need to establish challenges faced in feeding program and its influence on both academic achievement and enrolment of preschool children. The study was based on descriptive survey research design. It consisted of one (1) Sub-County Program Officer, 78 Head teachers' and 156 preschool teachers. Saturated sampling technique was used to select one (1) Sub-County Program Officer and simple random sampling technique used to select a sample size of 26 pre-school head teachers and 52 pre-school teachers. Data was collected using; questionnaires and interview schedule. The study found out that; administration of feeding program in pre-schools was low and challenged with inadequate finances to facilitate provision of required facilities, clean water, and balanced nutritious diet. This influences pupils' academic performance and enrolment in pre-schools negatively. Study findings recommended that; County government should allocate funds to support feeding program in pre-schools in order to promote both enrolment and academic achievement of pupils in pre-schools.

**Keywords:** Challenges, Feeding Program, Academic Achievement, Enrolment .

## INTRODUCTION

### Challenges in Feeding Program and Enrolment of Preschool Children

There are various differences in pre-school feeding approaches. The choice of school feeding approach, therefore, depends on the program objectives. Similarly, there are significant differences in the appropriateness of the different approaches to local capacity and contexts (Bundy, Burbano, Grosh, Gelli, Jukes and Drake, 2009). For instance in school feeding program, the timing and composition of school meals depends on such local factors as; the length of the school day, the nutritional status of children, local eating habits, availability of commodities (Bundy, *et al.*, 2009).

Caroline (2016) states that feeding program in schools is characterized by various challenges affecting academic achievement and enrolment of pupils in pre-schools that range from socio-economical to psycho-cultural to governmental policy or socio-political factors affecting children, teachers and institutions of learning.

World Food Program (2010) states that financial burden of running the feeding program for pre-school children over the past years has been a challenge as the government has no clear policy and support about it. Generally, the cost of pre-school feeding programs will depend on several different factors, including the choice of the feeding approach, the composition and size of the rations, whether the food is purchased locally or imported, and the number of beneficiaries and school feeding days per year.



Ahmed (2014) indicates that, majority of pre-school programs rely on community participation for daily implementation, while the overall management of the chain supply is often undertaken by an external partner. Such programs are often peripheral to the education sector management processes and the national budget.

Stakeholders' involvement in running the pre-school feeding program is very important in balancing between the program that counts on the community participation and ownership, which is a very positive factor in feeding program sustainability, and programs that seek to be greatly funded by the community. There is a tendency to consider community sustained feeding program as an alternative in reducing dependency on external support, but this places significant expectations on the communities, which may not be able to fulfill. In Kenya, communities experience challenges such as; inadequate financing of the provision of firewood, employment of cooks, provision of kitchen materials, water and supervision of the utilization of the project's funds among others while administering food program in pre-schools (NACECE, 2001).

Caroline (2016) indicates that, geography is the most frequent explicit criterion for targeting a pre-school feeding programs. Programs may be offered in some pre-schools or Sub-Counties and not in others. A poverty level and food security in the local community determines location and the parameters within which pre-school feeding program operates. In most cases, the geographic location and pre-school characteristics correlate with poverty level of the local community.

### Objectives of the Study

The study therefore aimed at finding out the challenges in pre-school feeding program and their influence on both academic achievement and enrolment of pre-schoolchildren.

## MATERIALS AND METHODS

### Research Design

The study used a descriptive survey research design. Descriptive survey research design was chosen because it is appropriate for educational research fact finding as it yields a great deal of information, which is accurate. It enables the researcher to gather data at a particular point in time and use it to describe the existing condition of nature (Cohen, Marion & Marizon, 2002). The study aimed at gathering or collecting information and characteristics that are observable in the assessment of management of feeding program in Pre-Schools in Suna East Sub-County.

### Methodology

Population of the study comprised of one (1) Sub-County Program Officer, 78 Head teachers and 156 preschool teachers. Saturated sampling technique was used to select one (1) Sub-County Program Officer and simple random sampling technique used to select a

sample size of 26 pre-school head teachers and 52 pre-school teachers (33% of the study population). This is a convenient size for a good survey (Mugenda and Mugenda, 2003). Simple random sampling technique was used because it gives equal opportunities to all members of the target population as selected (Borg and Gall 2007). The instruments used to collect data were questionnaires and interview schedule. Primary data was collected using both open and closed ended questions on rating scales, which addressed the objective of the study.

## RELIABILITY AND VALIDITY OF INSTRUMENTS

### Validity of the Instrument

Validity refers to the degree to which the study instruments accurately reflect specific concepts that the researcher is attempting to measure. For validity of the research instruments to be determined, experts from the School of Education of Rongo University examined the content of the instruments. Recommended improvements and alterations on the items of the research instruments were adjusted as suggested by the experts before the instruments were finally taken into the field. This method of establishing validity of the instruments is recommended (Joppe, 2002; Creswell & Miller, 2000).

### Reliability

To ensure reliability of the research instruments, a pilot study was carried out in three (3) schools, 3 head teachers and 6 pre-school teachers (12% of the study sample) were selected randomly and were excluded from the study. The instruments were self-administered and the process repeated after a period of two weeks. Pearson product moment correlation coefficient was used to determine the reliability of the questionnaires at the set alpha level of significance;  $\alpha=0.05$ . The results of analysis obtained were; 0.78 for the pre-school head teachers' questionnaires and 0.75 for the pre-school teachers' questionnaires, which were considered reliable (Kathuri & Pals, 1993).

### Data Collection Procedures

Before data collection, the researcher secured a research permit from the National Council for Science, Technology and Innovation (NACOSTI) through the Director, Post Graduate Studies of Rongo University. Thereafter, the researcher informed the County Director of Education and County Commissioner by presenting a letter of research authorization from NACOSTI. The researcher then informed the Suna East Sub-County Director of Education and ECDE Program Officer about the research study through a letter. This facilitated the researcher in notifying various Head teachers of pre-schools on the reasons for the study. Therefore, letters informing the pre-school head teachers on the research study were delivered to sampled head teachers two weeks before the researcher visited the pre-schools for data collection. For effective



administration of pre-school teachers' questionnaires, the researcher made personal visit(s) to sampled Pre-Schools and gave teachers relevant instructions on how to fill in the questionnaires. The researcher administered questionnaires to teachers and requested them to carefully fill in the questionnaires. The researcher gave them time to respond to the questions and finally collected the questionnaires before leaving for another station to avoid loss of questionnaires.

### Methods of Data Analysis

Quantitative data from close-ended questions were analyzed using descriptive statistics in form of frequency counts, means and percentages (Chamber and Skinner 2003) while t test was used to inferentially analyze the statistical significance difference between the rating of pre-school head teachers and pre-school teachers. However, qualitative responses to the open-ended questions, were organized, categorized and reported based on emergent themes and the analyzed data presented in tables.

## RESULTS AND DISCUSSIONS

### Influence of Challenges in Feeding Program on Enrolment of Pre-School Children

The study sought to find out the challenges faced in pre-school feeding program and their influence on enrolment of pre-school children. In order to respond to the research question, the head teachers and pre-school teachers were required to state the challenges they faced in the process of administering the feeding program in pre-schools.

Consequently, to capture the responses of both head teachers and pre-school teachers, open-ended questions were preferred since closed-ended questions limit the respondents to a set of responses, while open-ended questions give respondents freedom to express their opinions without the influence of the researcher (Bwonda and Enos, 2005).

The responses of head teachers and pre-school teachers on the challenges faced in the implementation of feeding program were analyzed and summarized in form of frequency counts and percentages based on the emerging themes, and the results presented in Table 1.

**Table 1:** Responses on Challenges in Preschool Feeding Program

Challenges	Head teachers		Pre-School teachers	
	Frequency	%	Frequency	%
Absence of government policy to support feeding program in pre-schools	18	81.8	30	85.7
Absence of appropriate preparation and serving facility for pre-school children to take their meals	15	68.2	25	71.4
Insufficient and inconsistent financial support from parents	14	63.6	20	57.1
Dislike of meals served by some pre-school children	2	9.1	8	22.9
Unbalanced diet	10	45.5	24	68.6
Ineffective supervision of food preparation to ascertain the quality of food and the environment	4	18.2	10	28.6
Over-enrolment in pre-school children	2	9.1	5	14.3
Lack of access to clean source of water	16	72.7	29	82.9

Table 1 shows that majority of head teachers 18 (81.8%) and pre-school teachers 30 (85.7%) indicated that absence of government policy to support feeding program in pre-schools was the greatest challenge. This suggests that feeding program in pre-schools are not established within government policy frameworks. Githuku (2015) supports the finding by stating that to improve school feeding program, the government should chip in.

The findings are in agreement with the Sub-County Program Officer's response indicating that there was no government policy to support implementation of feeding program in pre-schools, although in his own opinion he felt that there was need for such program to be in place in order to motivate and increase enrolment of children in the pre-schools. The Sub-County Program Officer had this said;

*“There is no government policy provision to support establishment of feeding program in pre-schools. This is a shortcoming since pre-school children*

*cannot stay in school for long hours without meals. Otherwise, I would advocate for feeding program in order to motivate and improve enrolment of pre-school children”.*

Similarly, Table 1 reveals that 15 (68.2%) head teachers and 25 (71.4%) pre-school teachers were in support that, absence of appropriate preparation room and serving points for pre-school children to take their meals was another great challenge affecting feeding program in the pre-schools. These findings concur with findings by Adenkule and Christina (2016) indicating that, absence of a central place (Dining Hall) in schools where pupils could eat their meals constituted a challenge. He further observes that preparation of meals was contracted out to food vendors who cooked food in their respective homes and then transported it to various schools. This is evident in what one of the Head teachers disclosed during an interview with the researcher in which he was heard saying that it was practically not easy to assess the sanitary condition of

the place where food was prepared. The head teacher was quoted saying;

*“Assessment of sanitary condition of places where meals are prepared is practically difficulty because such rooms in some of the pre-schools are congested with firewood, utensils and big water containers.”*

Also, the results in Table 1 indicate that, 14 (63.6%) head teachers and 20 (57.1%) pre-school teachers’ were in support that insufficient and inconsistent financial provisions from parents negatively affects feeding program in pre-schools. For instance, in an interview with a pre-school teacher, she stated that;

*“Some parents fail to contribute money to support feeding program in good time, some do not pay completely and still claim that their children should eat, otherwise, they threaten to withdraw their children from the pre-schools.”*

The findings are in agreement with Bwonda and Enos (2005) who note that, most rural schools lack many items ranging from firewood to fuel kitchen stoves, clean water, and money to pay cooks. They therefore find it is difficult to provide daily meal services without burdening parents for missing inputs.

On the other hand, 2 (9.1%) head teachers and 8 (22.9%) pre-school teachers stated that some children disliked the meals they provided. This could be a rare challenge in pre-schools as confirmed by statistics and disclosed by a pre-school teacher who expounded on the challenges by asserting that;

*“A few parents provide their children with expensive packed meals hence making those children from the less fortunate families to feel inferior and feel neglected”*

Equally, Table 1 shows that 10 (45.5%) head teachers and 24 (68.6%) pre-school teachers were in support that unbalanced diet was another challenge they faced in the feeding program. The findings are consistent with UNICEF (2010) which reports that most children suffer from moderate to severe underweight; moderate to severe wasting and moderate to severe

stunting; an indication that very few consume iodized salt and few receive vitamin A supplements.

In addition, Table 1 indicates that ineffective supervision of food preparation portrays the quality of food prepared and the environment in which the food is prepared. This was an average challenge in feeding program as evidenced by 4(18.2%) head teachers and 10(28.6%) pre-school teachers. The study findings concur with Adenkule and Christina’s (2016). Study findings indicating that inability to monitor the food preparation to ascertain its quality and that of the environment posed a major challenge. This difference in the magnitude of challenge could be a result of disparities in the policy environment guiding such programs.

Furthermore, 2(9.1%) head teachers and 5(14.3%) pre-school teachers indicated that over enrolment was not a challenge in feeding program. This could be because the school environment was not motivating pre-school children and consequently affected the enrolment in the pre-schools. Finally, 16(72.7%) head teachers and 29(82.9%) pre-school teachers stated that access to clean source of water was a major challenge that the pre-schools children experienced.

According to, Netherlands Development Organization (2007), some of the challenges experienced in school feeding program included; lack of kitchens, storage and dining halls, insufficient supply of food portions, lack of training in hygiene, lack of sanitation facilities and regular safe water, lack of transparency in records of food supply and payment procedures, and difficulties in monitoring preparation of meals, among others. In addition, Githuku (2015) deduces that the challenges faced in sustaining school feeding programs in schools in Karaba Zone, Embu County, include; some parents being unable to provide the required money, getting firewood and payment of cooks. These challenges are in agreement with the findings of the study.

Generally, in order to find out the influence of challenges in feeding program on enrolment of preschool children in Suna East, the head teachers and pre-school teachers were further asked to state if the challenges had an impact on enrolment or not. Table 2 presents summarized responses.

**Table 2: Influence of Challenges in Feeding Program on Enrolment of Pre-School Children**

Respondent	Do the challenges in feeding program have impact on enrolment?	
	Yes	No
Headteacher	22(100%)	0(0%)
Pre-school Teacher	24(68.6%)	11(31.4%)
<b>Total</b>	<b>46(80.7%)</b>	<b>11(19.3%)</b>

Table 2 indicates that a total of 46(80.7%) head teachers and pre-school teachers affirmed that the

challenges in feeding program had an impact on enrolment of pre-school children while a total of

11(19.3%) pre-school teachers differed in opinion. This suggests that the challenges in feeding program influence enrolment of pre-school children. Furthermore, Table 2 indicates 22(100%) head teachers and 24(68.6%) pre-school teachers acknowledged that challenges faced in feeding program impact negatively on enrolment of preschool children compared to 11(31.4%) pre-school teachers

who objected. These findings imply that challenges in feeding program affect enrolment in pre-schools negatively. The findings concur with Gervais, Ouko, Wasonga, et al. *Himalyan Jr. Edu. Etc.* Vol-2, Iss-3 (May-June, 2021): 15-19. Githuku (2013) who reports that the challenges of feeding program affect negatively early childhood education enrolment to a moderate extent in Karaba Zone, Mbeere South in Embu County.

## CONCLUSION

Based on the findings, the study concludes that administration of feeding program in Suna East Sub- County pre-schools was low and challenged with inadequate finances to facilitate provision of required facilities, clean water, and balanced and nutritious diet. This influences pupils' academic performance and enrolment of children in pre-schools negatively.

## Recommendations

Study findings recommended that; County government should allocate funds to support feeding program in pre-schools.

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