SCHOOL FEEDING PROGRAMME AND ITS INFLUENCE ON THE PRE-SCHOOL CHILDREN ACADEMIC PERFORMANCE IN KAPLONG ZONE BOMET COUNTY.

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A research project submitted in partial fulfilment of the requirement for the award of the degree of Bachelor of Education Early Childhood Education Department of educational communication and technology

UNIVERSITY OF NAIROBI

2014
DECLARATION
This project is my original work and has not been presented in any university for the award of any type of academic degree. Source of information other than mine have been acknowledged and a reference list has been appended.

Date ....................................... Signature ........................................

Kirui K. Barnabas.

This research has been submitted for examination with our approval as university supervisor

Signature ........................................Date..............................................

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To my parents, Joseph Rono and Lucy Rono
ACKNOWLEDGEMENTS

First of all I would like to thank the Almighty God for fundamental guidance, strength and good health which has enabled me to reach this far. Secondly I am very grateful to my Supervisor Mr. T Maonga School of Education, Department of Educational communication and Technology University of Nairobi who has been so helpful in the development of this study. His corrections, guidance and encouraging remarks have greatly motivated me. He has enriched me with the necessary skills. I’m really grateful to him.
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MOEST- Ministry of Education Science and Technology

ECE- Early Childhood Education

SFP- School Feeding Programme

EGMP- Embu Growth Monitoring Programme

UNICEF- United International child Emergency Fund

NTM- Neurotransmitters

PCV- Proteins Carbohydrates and Vitamins

ADD- Attention Deficit Disorder

NAP- Nutrition and academic performance

RDA- Recommended Daily Allowance

HHN- Hierarchy of human needs

SAT- Standard Achievement Test

CSR- Case research study

IQ- Intelligent Quotient
This study sought to establish the relationship between the school feeding programme and the pre-school academic performance. It tried to find out whether the quantity, quality and frequency of food provided to the pre-school children influence the educational outcomes of the pre-school children.

This study was carried out in pre-schools that provide school feeding programme win Kaplong Zone. The study employed survey research design whereby both the qualitative and quantitative approaches were applied. Simple random sampling was employed to select participants in the research. The instruments used were observation, questionnaire and documentary guide in data collection.

The study found out that feeding programme plays a critical role in the pre-school academic performance. School feeding programme with balanced diet were found to impact positively the academic performance. Pre-school children fed with adequate balanced diet and provided three times in a day performed far much better as compared to the children who are fed once with inadequate and unbalanced diet.
CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Early years of the child are the most important years in his/her life as they determine their future. It is such delicate stage that all efforts should be made to see it that nothing happens that will hinder the provision of the requirements for the attainment of their total development.

Ministry of education science and technology (MOEST) 1998, stated that provision of security, adequate nutrition and promotion of good health constitute the foundation of proper growth of the children. Early childhood education (ECE) lays foundation for creativity, imagination, self-reliance and survival. Sessional paper No 1 2005, stated that provision of early childhood education has been integrative in nurturing the whole personality of the child; it encompasses growth of the child’s physical, mental and socio-emotional attributes.

Provision of School Feeding Programme in pre-school has been hailed as the major contributor to ideal child development and improvement in academic performance. Bavely (1987) stated that School feeding programme (SFP) enriches the child’s diet; improve health and increases academic performance, hence continued sustenance of pre-school feeding programmes should be emphasized for the benefits of the children.

Bavely (1987), stated that if people do not eat anything, they die and inadequate consumption of food will always ignite negative development among children, they affect their performance in school as their mental and physical growth are handicapped.
Clara (1939), dealt with importance of selection of feeding programmes experiments and their effects on classroom performance. She stressed on feeding a child at least three times a day and with the right nutrients. She said that the child should be made to go to bed earlier than adults and older siblings should be given plenty of drinks between every meal.

The Kenyan government with the help world food programme has made a great effort to provide food. This is evident in the fact that some programmes in Kenya like Embu Growth Monitoring Programme (EGMP) has been operating by the ministry of health with funds from UNICEF, Anderson at al (1995)

1.2 Statement of the problem

This study aimed at finding out the influence of school feeding programme on the pre-school children academic performance in pre-school in Kaplong zone.

Oniango (1990), stated that food has been acknowledge as life and a power in activating people’s lives as well as supporting various areas of development and that, it depend upon correct amount and the type of food.

Oniango (1990), stated that though there are other factors that influence the pre-school academic performances, food was considered one of the most influential factor that if are run short of, not only influence the pre-school performances but it also disrupts the whole learning process.

1.3 Purpose of the study

The purpose of this study was to find out the types of meals, the amount of meals and how frequent they are served to the pre-school children. This study also established the performance of pre-schools children provided with balanced school feeding programme and those without in the same zone. It also sought evaluated, compared and contrasted its impacts on the pre-school academic performances.
1.4 Objectives of the study

The objectives of the study was to analyze the relationship that exist between the quantities, the quality, frequencies of food served and pre-school academic performance.

The specific objectives include;

i. To find out whether the quality of food taken by the pre-school children influence their academic performance.

ii. To examine whether there is relationship between the quantities of food provided to the children influence their academic performance.

iii. To determine whether the frequency of food provision to the pre-school children influence their academic performance.

1.5 Research questions

The research questions of this study include;

i. How does the quality of food taken by the pre-school children influence their academic performance?

ii. How does the quantity of food provided to the pre-school children influence their academic performance?

iii. How does the frequency in which food are provided influence the pre-school child academic performance?
1.6 The significance of the study

The study may be useful to the school administration/management, the curriculum developers, the scholars and even the society. The study may also be useful to feeding programme organisers and implementers.

1.7 Limitation of the study

This research study is limited in that it is only applicable to schools that have similar characteristics with the pre-schools in Kaplong zone that took part in the research study; hence its research findings cannot be generalized.

1.8 Delimitation of the study

This study was confined within the pre-schools in Kaplong zone that offers school feeding programme. The study also focussed only on pre-school children of age 3-6 years old.

1.9 Basic assumption

This study was carried out basing on the assumption that the school administration and the respondents provided correct and honest information.

1.10 Definition of key terms

**Academic performance** - the outcome of the child’s assessment over a given period in pre-school

**Frequency** - the number of times food is served to the pre-school children

**Quality** - the type of food provided to the children

**Quantity** – the amount of food provided to the pre-school children

**Pre-school** - institution of children of age 3-6 years attend to learn

**Pre-school children** - these are children of age between 3-6 years old in pre-school
School feeding programme - programme organise by the school to provide food to the children.

1.11 Organization of the study

The study is organized in five chapters. Chapter one is dealing with the background of the study, the statement of the problem, purpose of the study. Chapter one is also covering the research objectives, research questions, significance of the study, limitation and delimitation of the study, basic assumptions and lastly definition of the key terms. Chapter two is covering literature review, with an introduction under literature review, subheadings academic performance, the quality of food, the quantity of food, the frequency of food and theoretical framework. Chapter three is dealing with research methodology under sub-heading research designs, population, sample and size of the population, instruments, their validity and reliability. It is also dealing with procedure for data collection, data analysis and ethical concerns. Chapter four is dealing with the research findings while chapter five is presenting the summary, conclusion and recommendations.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section is reviewing existing literature about past research that highlighted studies concerning school feeding programmes and its relationship to academic performance. Studies have shown that proper nutrition has a direct effect on children's performance and behaviour in school. Much of the literature reviewed confirmed that nutrition has a direct effect on the brain performance.

Growden and Wurtman (1980) suggested that the brain can no longer be viewed as an autonomous organ, free from other metabolic processes in the body; instead, the brain needs to be seen as being affected by nutrition, hence for better performance of the preschool children there is need to provide a balance diet.

2.2 Academic performance

Academic achievement or (academic) performance is the outcome of education, it is the extent to which a child, teacher or institution has achieved their educational goals. Several methods are used to measure child academic performance, including standardized achievement test scores, teacher ratings of academic performance, and report card grades. Sattler, (2001) stated that standardized achievement tests are objective instruments that assess skills and abilities children learn through direct instruction in a variety of subject areas including reading, mathematics, and writing. Teacher rating scales allow teachers to rate the accuracy of the child's academic work compared to other children in the class, and allow for ratings on a wider range of academic tasks than examined on standardized achievement tests. DuPaul& Rapport, (1991) stated that report card grades allow teachers
to report on classroom academic performance, but are used by few studies for early elementary school children due to, among other reasons that is, a lack of a standardized grading system and uniform subject areas children are evaluated on.

2.3 Influence of quality of food on academic performance

Colby and Morley, (1981), stated that what we eat directly influences the brain, Kretsch (2001) showed further possibilities that quality of food has a role with affecting cognitive functioning. Studies have been done with school-aged children and point to a direct correlation between poor nutrition and lowered school performance. Iron reach food has also been shown to play an important role in brain function as well. Kretsch (2001), cited details from a study done with men aged 27 to 47 that looked at iron and its effect on concentration.

Low scores on a concentration test corresponded with lowered levels of iron in the bodies of the subjects. A connection was made between low iron levels in children with attention span; children with iron deficiency anaemia have been shown to have short attention spans. Kretschl, (2001), also found that zinc reach food was another nutrient that had a role with cognition, specifically with Nutrition and Academic Performance and memory. In a test of mental function called verbal memory Wood, (2001), carried out a research and found that volunteers’ abilities to remember everyday words slowed significantly only after three weeks of a low-zinc diet.

Erickson (2006) pointed out five key components, based on research, required to keep the brain functioning correctly i.e. PCV. The substances, all found in food, are important to brain development and function. Proteins are found in foods such as meat, fish, milk, and cheese. They are used to make most of the body tissues, including neurotransmitters,
earlier identified as chemical messengers that carry information from brain cells to other brain cells. A lack of protein, also known as Protein Energy Malnutrition, led to poor school performance by children and caused young children to be lethargic, withdrawn, and passive, all of which help affect social and emotional development.

Carbohydrates are commonly found in grains, fruits, and vegetables. Carbohydrates are broken down into glucose (sugar) which is where the brain gets its energy. Fluctuating levels of carbohydrates may cause dizziness and mental confusion, both of which can affect cognitive performance. Eating a carbohydrate-heavy meal can cause one to feel more calm and relaxed because of a brain chemical called serotonin and its effect on mood. Serotonin is created within the brain through the absorption and conversion of tryptophan. Tryptophan is absorbed within the blood and this absorption is enhanced with carbohydrates.

Erickson (2006) also noted that fat makes up more than 60% of the brain and acts as a messenger in partial control of aspects such as mood. Omega-3 fatty acids are very important to the optimum performance of the brain and a lack of these fats can lead to depression, poor memory, low IQ, learning disabilities, dyslexia, and ADD. Erickson (2006) discussed vitamins and minerals as an important substance for the functioning of the brain. Most important are the vitamins A, C, E, and B complex vitamins. Manganese and magnesium are two minerals essential for brain functioning; sodium, potassium and calcium play a role in message transmission and the thinking process. Aforementioned in the research, neurotransmitters are crucial to brain function in the transferring of messages. Erickson stated research that shows nutrition is important to the production of key neurotransmitters such as acetylcholine, dopamine, and serotonin.
A meal comprised of protein, fat, and sugar will prevent drops in blood sugar for several hours, whereas, a meal of just starch and sugar will sustain a child for only about two hours. A meal that included food from several food groups was the best for a child who was expects to perform at his or her best in school, educationally and physically. Wolfe and Burkman (2000) called Nutrition and Academic Performance attention to school food programs and contend that such programs need support, not disdain. Every lunch must contain at least one-third of the Recommended Daily Allowance (RDA) for specific key nutrients, and every breakfast must contain one-fourth of the RDA for specific nutrients. School meals must conform to the U.S. Dietary Guidelines and on a weekly average, no more than thirty percent of the calories can be from fat (Wolfe & Burkman, 2000). To sum up Wolfe and Burkman’s findings, the performance possibilities of children are very dependent upon their health and well-being; minds that have been given the proper nutrition will perform better on tests and general classroom tasks.

2.4 Influence of quantity of food on academic performance

The relationship between quantity of food and academic performance is often stated, however, studies have examined the effects of diet quantity on academic performance. Florence and Michelle (2008), stated that children perform better on standardized tests when given adequate amount of food the day of the test. When schools can offer free or reduced lunch programs these may positively affect academics, Florence and Michelle (2008) argued these programs are not far reaching enough and cover only the most impoverished children.
2.5 Influence of frequency of food on academic performance

Teras (2005) stated that proper frequency of nutrition enhances academic performance. School feeding programs have shown the effective role of nutrition in enhancing academic performance. Teras (2005), said that proper frequency of School feeding Programs improves school performance and reduces absenteeism and tardiness, relieves hunger and improves children’s ability to succeed at school, improves academic, behavioural, and emotional functioning and leads to increased math grades, lowered absenteeism, and improved behaviour.

Proper frequency of food increases physical activity leading to higher academic achievement. Recent studies show: Academic achievement improves even when the physical education reduces the time for academics. A reduction of 240 minutes per week in class time for academics to enable increased physical activity led to consistently higher mathematics scores, a recent study has shown a correlation between the SAT-9 test results with the Fitness gram indicating that the physical well-being of children has a direct impact on their ability to achieve academically. Children with the highest fitness scores also had the highest test scores.

2.6 Theoretical framework

Maslow (1943), proposed the idea that all human beings had a hierarchy of needs hierarchy of human needs (HHN). Maslow believed that every human being had several layers of needs, beginning at the base each layer need must be met before someone can meet the needs of the next layer. The top need is the layer known as self-actualization. Maslow (1954) explained that his hierarchy was a five stage model and he said “the basic needs
arrange themselves in a fairly definite hierarchy on the basis of the principle of relative potency.” Therefore each stage is based on the way in which we as human beings develop. Maslow’s theory is applicable in an educational context and more specifically to children. All children have a set of needs that if met with the help of parents, friends and teachers can help mould a child and build a good foundation for adulthood. If there is a deficiency in the needs or any are neglected it can result in hindering a child’s performance and behavior in school. If we break the hierarchy down into its five stages we can evaluate the impact they have in the lives of children and their learning.

The first stage is physiological needs, considering this stage in terms of a child we can see that just as adults do children require breathing, excretion, food, water and sleep. The other element of this stage is sex, but for a child this not yet relevant. Considering the need for sleep and food further we can see areas of this stage that can seriously affect how a child performs in school. Without a proper diet and reasonable amount of sleep children’s concentration will decline and their minds will be focused on other things such as hunger. As a direct result of this the child will lack the energy required to actively participate in activities throughout the school day and this could affect their performance in the classroom. Problems such as these are often linked to children who come from troubled homes and many schools have set up initiatives to combat some problems that can affect the performance of children in school. School have introduced school feeding programmes where children can receive food before the school day for a cut price or free in some cases.

Once the physiological needs of a child are met they can move on to the second stage which concerns “safety. Moving on to the third stage of the hierarchy “belonging” this is the point where a child wants to feel loved and accepted in several areas of their lives. The fourth stage children seek to meet their needs for self-esteem. The final stage of the
hierarchy of needs is “self-actualization” according to Sprenger (2008) self-actualization suggests that someone has achieved “what they were born to do. Maslow (1943), a child set goals for themselves and in some cases children aspire to achieve something later on in their life from a very young age.

2.6 Conceptual framework:

![Diagram of conceptual framework]

Figure 1 show how crucial is the school feeding programme to pre-school child academic performance. Providing children with high quality food improves the brain functions which in turn enhances academic performance. High quantity food ensures improvement in the standard test scores which corresponds to improvement in academic performance. Proper frequency of food increases aid in improving academic performance.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section dealing with the research method under sub heading: research design, population, sampling procedure and sample size, instruments, validity and reliability of the instruments, procedure for data collection and data analysis.

3.2 Research design

This study employed survey research design whereby both qualitative and quantitative approaches were applied.

3.3 Target Population

The targeted population in this study were all the pre-school children and teachers in pre-school in Kaplong zone that offers school feeding programme. These are children from different socio-economic background of age 3-6 years old. These are the children who are active, they are in the pre-school and still undergoing through developmental milestones and any change in their diet can bring change physically, socially, cognitively and even psychologically.

3.4 Sampling procedure and sample sizes

This study applied simple random sampling in select participants in research. 10 pre-schools providing school feeding programme were randomly selected to take part in the
research. 10 teachers were randomly selected to fill questionnaires. Observation schedule was conducted among the children.

3.5 Instruments

This research study employed observation, questionnaire and documentary research instruments.

3.5.1 Observation schedule

The researcher visited the randomly selected 10 schools in Kaplong zone critically observed the type, the amount and the frequency of food given to the children, observed the menu of the school feeding programme. The researcher catered data at the scene of action. The researcher filled the observation schedule shown in appendix I during the process of observation.

3.5.2 Questionnaire for the teachers

The researcher used both close and open ended questionnaires as shown in appendix II. The instrument was administered to 10 randomly sampled teachers in randomly 10 selected schools. Close-ended questionnaire gave the respondents freedom to choose freely from option given while open ended questionnaire allowed the respondents have a room to express their views.

3.5.3 Document Analysis

The researcher obtained the class progress records, the class register from the class teacher, the school feeding programme menu as shown in appendix III and appendix IV from the
school administration, the researcher then analysed the children’s performances alongside with the school feeding programme menu.

3.6 Validity and reliability

The researcher carried out pilot-testing of the instruments to establish the validity and reliability. To establish the instrument reliability, the researcher used test-retest techniques, whereby the same gathering tool was applied on the same respondent at different times. The instrument produced the same results proving its reliability.

3.7 Procedure for data collection

The researcher first sought the authorization from the school authorities before commencing data collection; the researcher then penetrated into the scene of behaviour and filled the observation schedule. The researcher used both close and open ended questionnaires as shown in appendix II. The instrument was administered to 10 randomly selected teachers. The researcher also obtained documentary guide as shown in appendix III from the class teacher then analysed the children’s performances alongside with the school feeding programme menu.

3.8 Data analysis

Data were analysed using descriptive statistics, calculation of percentages and then presented in the form of tables relevant to the theme.

3.9 Ethical concerns

The identity of the research respondents were kept confidential.
CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 INTRODUCTION

This chapter presents empirical research findings using descriptive statistics, calculation of percentages and presentation of data in table forms.

4.2 ACADEMIC QUALIFICATION OF THE RESPONDENTS

Pre-schools with teachers equipped with knowledge and skills understand the significance of the balanced school feeding programme among the pre-school children, these are the teachers who went through either DICECE level, Diploma or a Degree level. Children performs better in their academic performance, they reach full developmental potential emotionally, psychologically, physically and socially as compared to pre-school children handled by the O-level teachers.

The table below shows the academic qualification of the pre-school teachers that took part in the research.

Table 4.1 ACADEMIC PERFORMANCE OF THE RESPONDENTS

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
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<tbody>
<tr>
<td>O-level</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>DICECE</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>DIPLOMA</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>DEGREE</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>
According to the table above 50% of the pre-school teachers have not attended either dicece, pursued diploma or pursued degree, the table shows that half (50%) of the teachers who took part in the research have not been equipped with the necessary knowledge and skills on how the pre-school children should be handled. It also shows that, most of the pre-school teachers have limited knowledge on the significance of school feeding programme among the pre-school children and how it impacts on their academic performances.

4.3 WORK EXPERIENCE

Experience is one of the crucial factor in every field, teachers with experience understand the influence of the balanced school feeding programme on the academic performance, they have at the back hands skills and knowledge on how to handle children from different background, children with different personalities into a fully developed human, that is, they help them reach full developmental potential psychologically, emotionally, physically and socially. The table below shows work experience of the respondents who took part in the research study.

Table 4.2 WORK EXPERIENCE OF THE RESPONDENTS

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
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<tbody>
<tr>
<td>5 and Above years</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>3-5 years</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>1-2 years</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>
The above table shows that 70% of the teachers who took part in the research have had adequate experience when it comes to working with the children. 30% of the respondents had not adequately had experience working with the children.

4.4 QUALITY OF FOOD
Wolfe and Burkman (2000), stated that a meal comprised of protein, fat, and sugar will prevent drops in blood sugar for several hours, whereas, a meal of just starch and sugar will sustain a child for only about two hours. A meal that included food from several food groups was the best for a child who was expects to perform at his or her best in school, educationally and physically. Wolfe and Burkman (2000) called Nutrition and Academic Performance attention to school food programs and contend that such programs need support, not disdain.

4.4.1 QUALITY OF FOOD SERVED AT BREAK TIME
Colby and Morley, (1981), stated that what we eat directly influences the brain, Kretsch (2001) also showed further possibilities that quality of food has a role with affecting cognitive functioning. The micro-nutrients found in different types of food are important to brain development and function. The table below shows different types of food pre-school children are given during break time (mid-morning).

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Porridge + slice of bread</td>
<td>1</td>
<td>10</td>
<td>Above average</td>
</tr>
<tr>
<td>No meal at break time</td>
<td>1</td>
<td>10</td>
<td>Below average</td>
</tr>
<tr>
<td>Porridge</td>
<td>3</td>
<td>30</td>
<td>Average</td>
</tr>
<tr>
<td>Porridge + Bananas</td>
<td>5</td>
<td>50</td>
<td>Good</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>10</strong></td>
<td><strong>100</strong></td>
<td></td>
</tr>
</tbody>
</table>
The table above shows that half (50%) of the respondents who took part in the research study provide their pre-school children with two types of food which are rich in nutrients, this shows that these respondents had already understood the significance of providing the pre-school children with the balanced diet as it impacts on their performances. 10% of the respondents provide no meal to the children at break time and the table shows how it greatly influence children’s academic performance, children who receive no meal in the mid-morning were found to perform below average in their academic performance.

40% of the respondents who provide their pre-school children with one type of food show children academic performance to be average.

4.4.2 QUALITY OF FOOD SERVED AT LUNCH TIME

Lunch meal comprising of different types of food containing different food substances like proteins, carbohydrates, fats and vitamins are crucial for the pre-school children. Proteins aid in development of body tissues, including neurotransmitters. Carbohydrates provide energy. Omega-3 fatty acids are important for the optimum performance of the brain, therefore there is need to ensure provision of balanced school feeding programme.

The table below shows the different types of meals served to the pre-school children at lunch time.
Table 4.4 QUALITY OF FOOD SERVED AT LUNCH TIME

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ugali+Kales+Fruits</td>
<td>3</td>
<td>30</td>
<td>Excellent</td>
</tr>
<tr>
<td>Rice+Beans</td>
<td>4</td>
<td>40</td>
<td>Good</td>
</tr>
<tr>
<td>Ugali+Kales+Meat</td>
<td>2</td>
<td>20</td>
<td>Excellent</td>
</tr>
<tr>
<td>Githeri</td>
<td>1</td>
<td>10</td>
<td>Good</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>10</strong></td>
<td><strong>100</strong></td>
<td></td>
</tr>
</tbody>
</table>

According to the table above, half (50%) of the pre-schools that took part in the research study provide children with meals rich in all the nutrients, i.e. proteins, carbohydrates and vitamins, the performance of these children is reflected by the types of meals served to them at lunch time. This shows that the school administration and the school feeding programme developers understand the significance of providing the pre-school children with balance school feeding programme.

Children served with two types of nutrients i.e. proteins and carbohydrates were found to performed good but not as children those who are served with meals reach in all the nutrients i.e. carbohydrates, proteins and vitamins.

4.5 QUANTITY OF FOOD.

Florence and Michelle (2008), stated that children perform better on standardized tests when given adequate amount of food the day of the test.
4.5.1 QUANTITY OF MEALS SERVED AT BREAK TIME.

Standard quantity of food served to the pre-school children impacts positively on the pre-school children’s academic performance, too much and inadequate meals served to the pre-school children influence the performance negatively. The table below shows the amount of food served to the pre-school children at break time.

Table 4.5 QUANTITIES OF MEALS SERVED AT BREAK TIME.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 cup of Porridge + 1 slice of bread</td>
<td>1</td>
<td>10</td>
<td>Above average</td>
</tr>
<tr>
<td>No meal at break time</td>
<td>1</td>
<td>10</td>
<td>Below average</td>
</tr>
<tr>
<td>1 ½ cups of Porridge</td>
<td>3</td>
<td>30</td>
<td>Average</td>
</tr>
<tr>
<td>1 cup Porridge + 2 Bananas</td>
<td>5</td>
<td>50</td>
<td>Good</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>10</strong></td>
<td><strong>100</strong></td>
<td></td>
</tr>
</tbody>
</table>

From the table above 50% of the respondents who serve pre-school children with a cup of porridge and 2 bananas were found to perform far much better as compared with those who serve their children with a cup of porridge with a slice of bread. This shows they are knowledgeable on the importance of balanced school feeding programme to the pre-school children. 10% of the respondents who serve their children with 1 ½ cups of porridge were found to have their children performing below average. 10% of the respondents whose Pre-school children receive no meal at break time perform below average.
Table 4.6 QUANTITIES OF MEALS SERVED AT LUNCH TIME.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 slice of Ugali + 2 full spoons of Kales + ½ piece fruit</td>
<td>3</td>
<td>30</td>
<td>Excellent</td>
</tr>
<tr>
<td>1 cup Rice + ½ a cup of Beans</td>
<td>4</td>
<td>40</td>
<td>Good</td>
</tr>
<tr>
<td>1 piece of Ugali + 2 full spoons kales + 5 pieces of Meat</td>
<td>1</td>
<td>10</td>
<td>Excellent</td>
</tr>
<tr>
<td>1 piece of Ugali + 2 full spoons kales + 3 pieces of Meat</td>
<td>1</td>
<td>10</td>
<td>Excellent</td>
</tr>
<tr>
<td>1 cup of Githeri</td>
<td>1</td>
<td>10</td>
<td>Good</td>
</tr>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

From the table above, 50% of the respondents who serve their pre-school children with 1 piece of Ugali, 2 full spoons of kales, ½ piece of a fruit and those served with 1 piece of Ugali, 2 full spoons kales, 5 and 3 pieces of meat respectively perform well in their academic performance while those who serve their pre-school children with 1 cup of Githeri and those who serve with 1 cup of rice and ½ a cup of beans also perform good in their academic performance but not as the other 50% of the respondents.

4.6 FREQUENCY OF FOOD

Teras (2005) stated that proper frequency of food served to the pre-school children improves performance and reduce absenteeism and tardiness, relieves hunger and improves children’s ability to succeed at school, improves academic, behaviour and emotional functioning and leads to increased math grades.
The table below shows the number of children are serve with meals

**Table 4.7 FREQUENCY OF FOOD**

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage (%)</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>1</td>
<td>10</td>
<td>Average</td>
</tr>
<tr>
<td>Twice</td>
<td>9</td>
<td>90</td>
<td>Good</td>
</tr>
<tr>
<td>Thrice</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

From the table above 90% of the pre-school who took part in the research serve meals to the pre-school children twice a day, while 10% of the respondents serve their pre-school once a day. The table also shows that the performance of children with respect with the number of times they are fed. Children served with meals twice a day are seen to perform better than children served once in a day.
CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

This research was based on the school feeding programme in pre-school in Bomet County Kaplong zone to find out the impacts of the school feeding programme on the pre-school academic performance.

Most of the pre-school in Kaplong zone offers school feeding programme that ensures balanced diet are served to the pre-school children, this impacts positively on their academic performance.

The researcher also found out that there are some pre-schools that provide the pre-school children with unbalanced diet, this impact negatively on the academic performance of the pre-school children; the researcher found out that this was due to insufficient knowledge among untrained teachers on the significance of the school feeding programme with balanced diet among the pre-school children.

5.2 Conclusion

From the research findings, it is therefore clear that school feeding programme is among the most crucial components that determine pre-school children academic performance. It is also clear that cases of poor academic performance among the pre-school children can greatly be reduce by provision of school feeding programme with well-balanced diet, adequate meals and well-timed provision of meals to the children to alleviate short term hunger this possibly improving children ability to concentrate and learn.
Unbalanced diet provided in the school feeding programme was found to affect children’s academic performance. The nutrients essential for development and general well-being should be provided in order to promote the general well-being of the children.

5.3 Recommendation

The researcher came up with the following recommendation:

That the pre-school administrations and the school feeding programme developers should be sensitized on the need to ensure that food supplied to the pre-school are adequate and contain all the nutrients crucial for the growth and development of the pre-school children, food that are reach source of energy since pre-school children are ever curious discovering the world around them.

That the community within the school that supply food to the pre-schools be sensitized on the need to grow different types of food crops.

That the pre-school parents should be encourage to pay school fees in time for smooth management of the school feeding programme.
REFERENCES


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DePaul, G Rapport m. (1991). Teacher rating academics skills: the development of the academic performance rating scale. School psychology review 20,284-300\


Sattler J, (2008). Low academic achievement, and to predict future academic achievement. 18KB (2,579 words) - 18:56, 22 November 2013


APPENDICES

APPENDIX I: OBSERVATION SCHEDULE FOR THE CHILDREN

I. Meals served to the children at:
   Tea break
   ..............................................................
   ..............................................................
   ..............................................................
   ..............................................................
   Lunch time
   ..............................................................
   ..............................................................
   ..............................................................
   ..............................................................
   Other times
   ..............................................................
   ..............................................................
   ..............................................................
   ..............................................................
   II. Quantity of meals served to the children at break time.

III. Quantity of meals served to the children at lunch time

IV. Quantity of meals served to the children at any other time (indicate the time)

V. Frequency of food served
<table>
<thead>
<tr>
<th>Frequency</th>
<th>Progress of Children Served with One Type of Food</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once a day</td>
<td>![ ] ![ ] ![ ]</td>
</tr>
<tr>
<td>Twice a day</td>
<td>![ ] ![ ] ![ ]</td>
</tr>
<tr>
<td>Thrice a day</td>
<td>![ ] ![ ] ![ ]</td>
</tr>
</tbody>
</table>

VI. Progress of children served with one type of food.

| Good | ![ ] ![ ] ![ ] |
| Better | ![ ] ![ ] ![ ] |

VII. Progress of children served with different types of food.

| Bad | ![ ] ![ ] ![ ] |
| Better | ![ ] ![ ] ![ ] |
| Best | ![ ] ![ ] ![ ] |

VIII. Progress of children served once in a day.

| Bad | ![ ] ![ ] ![ ] |
| Better | ![ ] ![ ] ![ ] |
| Best | ![ ] ![ ] ![ ] |

IX. Progress of children served twice a day.

| Good | ![ ] ![ ] ![ ] |
| Better | ![ ] ![ ] ![ ] |
| Best | ![ ] ![ ] ![ ] |

X. Progress of children served more than two times a day.

| Good | ![ ] ![ ] ![ ] |
| Better | ![ ] ![ ] ![ ] |
| Best | ![ ] ![ ] ![ ] |
APPENDIX II: QUESTIONNAIRE GUIDE FOR THE TEACHERS

This questionnaire is intended to help the researcher get relevant information to the research questions and objectives. Kindly answer the questions as honestly as you can.

I. Academic qualification

☐ O-Level

☐ DIPLOMA

☐ DICECE

☐ DEGREE

II. Working experiences

☐ 1-2 years

☐ 3-5 years

☐ 5 and above

III. Is the school private or public?

☐ Private

☐ Public

IV. How many times are children served with meals?

...........................................................................................................................................................................
V. What are the types of meals served to the children at break time?
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V. What are the types of food served to the pre-school children at lunch time?
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VI. What are the types of food served to the children at any other time? (Indicate the time)
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VII. How much is food served to the children at:
Break time?
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Lunch time?
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Any other time? (Indicate the time)
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APPENDIX III: THE PRE-SCHOOL CLASS PROGRESS RECORD FORM

NAME OF THE SCHOOL

Year.............. Month.......... Date.......... Week..........

<table>
<thead>
<tr>
<th>CHILD NAME</th>
<th>ACTIVITY</th>
<th>PERFORMANCE</th>
<th>TEACHER’S REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>
APPENDIX IV. THE MENU FOR THE PRE-SCHOOL FEEDING PROGRAMME.

NAME OF THE SCHOOL

<table>
<thead>
<tr>
<th>Days of the week</th>
<th>Breakfast</th>
<th>Mid-morning (Break time)</th>
<th>Lunch time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tue</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Wed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thurs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fri</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>