

**Effect of students' living conditions on their academic performance in
secondary schools of Goma
Sub County, Mukono District**

BY

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DECLARATION

I, Nabaseruka Joan, do declare that this research report is my personal work and has never been presented by any person for any academic award to any institution of higher learning.

Signed -----

Nabaseruka Joan

Date -----

APPROVAL

I hereby certify that the dissertation entitled “**effect of students’ living conditions on their academic performance in secondary schools of Goma sub-county, Mukono district**” is the original work of Nabaseruka Joan and has been under my supervision.

Signed -----

Dr. Beatrice Sekabembe

Date-----

DEDICATION

This research work is dedicated to my mother Ms. Kibuuka Margaret and my husband Mr. Bamwenda Martin who supported me throughout this period. May God richly bless them.

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ACRONYMS

ANOVA:	Analysis of Variance
DES:	Directorate of Education Services
ESA:	Education Standards Agency
FAO:	Food Agricultural and Organisation
MISR:	Makerere Institute of Social Research
MoES:	Ministry of Education and Sports
PLE:	Primary Living Examinations
SPSS:	Statistical Package for Social Scientists
UACE:	Uganda Advanced Certificate Examination
UNEB:	Uganda National Examinations Board
UNICEF:	United Nations International Children's Education Fund
USE:	Universal Secondary Education

ABSTRACT

The purpose of the study was to investigate the effect of living conditions on students' academic performance. The study objectives were; to examine the effect of feeding, school sanitation and accommodation on students' academic performance in Goma sub county Mukono district. A cross sectional survey design using both quantitative and qualitative methods was used to collect data from 202 students and 30 teachers and 7 Head teachers. The qualitative study design investigated the possibility of the relationship between the independent and the dependent variables like feeding, sanitation, accommodation and academic performance.

The sample was drawn from boarding students in secondary schools of Goma Sub County especially those in Advanced level. Data on living conditions was gathered using a questionnaire with standard likert type scale with closed ranking items. Structured interview guides were used to collect views from the non students. Data from questionnaires was analyzed using both descriptive and inferential statistics of Analysis of Variance (ANOVA) and the t-test while interview data was analyzed using frequency analysis by counting the number of times of responses had by the respondents. The findings suggested that students in schools which performed poorly were not satisfied with the living conditions and this affected their academic performance compared to schools which performed fairly where students were satisfied with the living conditions.

From the study, the following conclusions were drawn; firstly, poor feeding of students negatively affects their academic performance. Secondly poor sanitation negatively affects

students' academic performance and finally, school accommodation negatively affects students' academic performance.

From the above conclusions it was therefore recommended that in schools where living conditions were very poor, the school administration had to set up an agricultural and poultry farms to supplement on the food provided to improve on feeding. The school administration should also include health education on the school time table and also organize healthy talks to students. Lastly the Ministry of Education and Sports through the supervision unit should ensure that all schools in rural areas follow the guidelines on proper accommodation.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter describes the background of the study, the statement of the problem, the general objectives, specific objectives, research questions, research hypothesis, scope and significance of the study.

1.1 Background

1.1.1 Historical Perspective

Formal education in Uganda has its origins in missionary activity from the turn of the 19th Century. Formal education system consists of seven years of primary education, four years of secondary education and two years of advanced level education. After seven years of primary education, students undertake Primary Living Examinations (PLE), those who continue into secondary education spend four years studying for ordinary level examinations provided by Uganda National Examinations Board (UNEBC) and those who proceed to the advanced level spend two years studying for advanced level examination also provided by UNEBC, (Kajubi, 1992).

The World Bank Review (1995) demands for adequate and efficient education systems as a basic human right for all people regardless of their station in life. For this reason therefore, the government of Uganda committed itself towards providing quality basic education and training to prepare its nationals for the challenges of the 21st Century. The challenges included globalization, modernization and information age among others (National Report on the

development of Education in Uganda, 2004). As a way forward, the government of Uganda started providing free education for four school going children per family in 1997. Later in 2007, another programme; Universal Secondary Education (USE) was introduced to target the bright but needy students especially those in rural, remote communities and districts (Ministry of Education and Sports (MoES) planning department, 2007).

Indeed, commendable effort has been directed towards the improvement of academic performance of students in the education sector. However, there seems to be a growing concern where the students' living conditions have been neglected since most private schools are operating boarding sections without the approval from the Ministry of Education and Sports (Inspectorate Report from Directorate of Education Standards, 2008). This same report clearly pointed out that majority of private schools in Nakasongola, Mpigi and many other districts in Uganda had poor facilities, students were congested, lived in risky location, incomplete structures with no security measures, some schools had no bathrooms, toilets, boys and girls share the same facility with only ply wood separating them an indicator of poor living conditions. In such instances, the conditions can not favor effective learning of students since it is known that a healthy mind exists in a healthy body surrounded by a healthy environment for students to perform better. This implies that students' needs should be adequately met.

1.1.2 Theoretical Perspective

This study was guided by Maslow's theory of Motivation as cited in Okumbe (1998) which argues that individuals (in this case students) learn better when all physiological needs are gratified. Maslow further elaborated the theory in Okumbe (1998) and lists the physiological

needs like hunger, thirst, sleep and other needs. Kasenene (1999) citing Maslow (1972) emphasized that students cannot expend energy and learn if they are hungry and malnourished. However, in developing countries like Uganda, these needs may not be given priority in poor schools yet are likely to affect students' academic performance and this drove the researcher to find out the effect of students' living conditions on their academic performance.

1.1.3 Conceptual Perspective

In this study, the dependent variable was academic performance and it was defined as observable manifestation of knowledge, skills, concepts, understanding ideas. It can also be taken to mean knowledge and skills gained at school designated by test scores or marks assigned by teachers. In Uganda performance at advanced level is largely measured and judged against results of Uganda Advanced Certificate Examination (UACE). In this context therefore academic performance was measured by UACE results of students. Living conditions the independent variable was used as a generic term to refer to good feeding, good sanitation and good accommodation facilities. Farlex (2003) defined feeding as give or supply food with nourishment or the act of consuming nourished food. Good feeding was operationalised as serving good quality food in its right quantity, nutritious diet, and the safety of drinking water provided to students. Good sanitation is where the environment is clean concurring with the School Sanitation Consultative Meeting Report (1999) which defined it as personal and universal cleanliness. Personal cleanliness involves food hygiene practices, safe disposal of solid and liquid waste, safe collection, storage and use of clean water especially for drinking. Good sanitation therefore is cleanliness of toilets and bathrooms, cleanliness of the drainage system, access to hand washing facility and the good state of dustbins. Accommodation was defined as a place where boarding students reside.

Accommodation was operationalised as ventilation of rooms, state of security, and lighting system in the rooms and the spacing in the rooms where students reside.

The other factors outside students' living conditions include home environment which consists of support from parents, brothers and sisters. The support got from parents to a learner through academic guidance, economic facilitation and encouragement also affects a learner's academic performance. It should also be noted that family members' education has a substantial influence on students' choice and performance. Where a learner gets no family encouragement, in most cases the academic performance will be poor than when a learner gets all the encouragement needed. Still to note Minnaert and Janssen (1992) indicated that students' individual characteristics such as motivational orientations, self esteem and learning approaches greatly influence students' academic performance.

1.1.4 Contextual Perspective

The Ministry of Education and Sports Annual Performance Report (2005) revealed that in the financial year 2006/2007, money was released to different sectors like pay salaries, pay for capitation grants, bursary schemes among others but nothing was released to cater for students' living conditions. Burnet (1995) clearly stated that living and learning conditions in institutions affect the critical thinking, intellectual development and aesthetic appreciation of students. Acola (1992) argued that to study effectively, students' living places should have such basic facilities like enough room, adequate meals, safe water and other things.

According to nutrition experts and doctors (Senderowitz, 1995) a quality meal should provide energy and body building materials for the body to maintain itself. Providing nutritious meals to students makes them achieve their objectives. United Nations' Children's Education Fund (UNICEF) (2006) reported that sanitation has not been taken as a priority and as a result some schools have failed to take sanitation seriously with appalling results such that some students have expressed open dislike and dissatisfaction with the state of sanitary facilities in their school, hand washing facilities at lower priority level, lack of access to safe water and many other dislikes.

Still, the Uganda Education Standards Agency (ESA) Report (2003) revealed that most schools with boarding provisions had poor facilities and were over crowded. A number of private schools in Uganda had opened illegal boarding sections or hostels in the neighborhoods but supervision by matron and wardens was inefficient which results in leaving students on their own thus putting them at a great risk. The same report revealed that boarding schools particularly those that are poorly facilitated have limited space in dormitories and the students sleep on triple deckers. There is hardly space where students can put their belongings such as suit cases, bags, Jerry cans and other things. If space is not enough then proper feeding cannot be effected since other things like building need to be given more priority so as to accommodate more numbers. Many schools with boarding section prioritize construction of more structures as their priority, thereby neglecting feeding of students. However, there are some schools which desire to have more students and so, set a trap of giving them a variety of foods but not up to the recommended value by nutritionists. This is done only for a while because when the numbers increase the costs increase and therefore such schools give up the good feeding.

As for sanitation, most schools have not lived up to the expected standard since Malaria and other common illnesses have remained common in schools. This is basically because of the bushy environment and stagnant water which acts as a breeding place for mosquitoes is present in students' living places. The Directorate of Education Services (DES) (2008) reported that majority of schools inspected operated boarding section illegally and their boarding facilities fell below the expected standard (See Appendix VII). When living conditions are poor, then students' academic performance is likely to be negatively affected. That is why students in well facilitated schools commonly known as the 'first world schools' perform well since their rich parents can supplement the school requirements to create a good learning environment for their students. However this is not the case for students in rural poorly facilitated schools commonly known as the 'third world schools'. Students in these schools come from middle class families and their parents may not be in position to supplement to what the school provides which creates a deficit in required facilities leaving them at a greater risk of poor academic performance.

It was upon this background that a clear indication of poor living condition in most schools in Uganda affected academic performance of students. This was the reason as to why the researcher sought to establish in greater depth the effect of living conditions on students' academic performance in Uganda with a particular emphasis on selected schools in Goma Sub County in Mukono District.

1.2 Statement of the Problem

The performance of rural poorly facilitated schools also known as third world schools is generally poor compared to those schools in urban areas and are well facilitated. This was

confirmed by the Makerere Institute of Social Research (MISR) Report (October, 2000) that urban schools excel in academic performance better than rural schools. There are several factors that could be responsible for this, such as poor quality teachers, classrooms and learning resources. However, it is hypothesized that the state of the students' living conditions as characterized by feeding, sanitation and accommodation, could be one of the factors affecting academic performance of secondary schools in Goma Sub-County in Mukono District. If students are to make the most of their educational opportunity, it is crucially important that they enjoy adequate facilities for accommodation, private study and health recreation. The poor living conditions in schools are presumed to be some of the factors that affect students' academic performance.

The report of National Inspection Programme (2003) revealed that living conditions in most schools of Mpigi, Nakasongola and Mubende districts were miserable, sanitation had been completely neglected, toilets were few compared to the number of students, toilets and classrooms were generally dirty while in some schools water provided was unhealthy. The boarding facilities were poor and overcrowded, coupled with insecurity bringing to a conclusion that students' living conditions were inadequate in such districts. It was not clear whether the situation was the same in Goma Sub County Mukono district and that is why the researcher considered it necessary to carry out a study in Goma Sub County to confirm. Therefore this study sought to establish in detail the effect of students' living conditions on students' academic performance.

1.3 General Purpose

The general purpose of the study was to establish the effect of living conditions on academic performance of students in secondary schools of Goma Sub County Mukono District.

1.4 Specific Objectives

The study was guided by the following objectives

1. To examine the effect of feeding on academic performance of students in Goma Sub County Mukono District
2. To examine the effect of school sanitation on students' academic performance in Goma Sub County Mukono District.
3. To find out the effect of accommodation on students' academic performance in Goma Sub County Mukono District.

1.5 Research Questions

1. How does feeding of students affect their academic performance in Goma Sub County Mukono district?
2. How does school sanitation affect students' academic performance in Goma Sub County Mukono district?
3. How does students' accommodation affect their academic performance Goma Sub County in Mukono district?

1.6 Research Hypotheses

The study was guided by the following hypotheses:

1. Feeding of students does not affect academic performance in Goma Sub County Mukono district.

2. School sanitation does not affect students' academic performance in Goma Sub County Mukono district.
3. Accommodation does not affect students' performance in Goma Sub County Mukono district

1.7 Scope

The study was conducted in Goma Sub County Mukono District situated in the central region of Uganda and covered seven selected secondary schools from Goma Sub County. The focus of this study was on students since they are the ones mostly affected by living conditions in a school.

The content scope of the study covered the effect of students' living conditions (feeding, sanitation and accommodation) on their academic performance, in Goma Sub County Mukono district.

1.8 Significance

The research findings are beneficial to the responsible officials in the Ministry of Education and Sports, Head teachers, School Boards and policy makers by communicating the existing gaps in the living conditions of students and how such living conditions affect students' academic performance. The findings are also an addition to the existing research information in the country. The findings will be used by other researchers to build on as they do their research in the field of discipline, strikes in schools and other areas of research.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents the theoretical review, conceptual framework and the review of related literature on the effect of students' living conditions on their academic performance.

2.1 Theoretical Review

Maslow (1943) cited in Kasenene (1999) argues that physiological needs such as food and water are the primary drives which need to be satisfied before a person can realize any need for a secondary desire. According to Kasenene (1999), Maslow advanced a theory of Motivation in 1968 which argued that students will always have the need to learn after all the physiological needs are gratified. Maslow therefore concluded that learning is secondary to bodily needs and any attempt towards learning requires satisfaction of physiological or bodily needs as an unavoidable pre-requisite. In this study such needs included feeding, sanitation and accommodation.

Further studies by Maslow in human motivation led him to advance the theory of needs based on a hierarchical model as covered by Okumbe (1998). According to Okumbe (1998: 45), there are psychological needs that include hunger, thirst and sleep; the safety needs that include desire for peace, smooth running of the state and stable environment; the love needs that include belonging and affection/social needs; the esteem needs that include power, achievement, recognition, status and self-actualization where one achieves what he wants.

This theory can be illustrated diagrammatically as seen in figure 2.1.

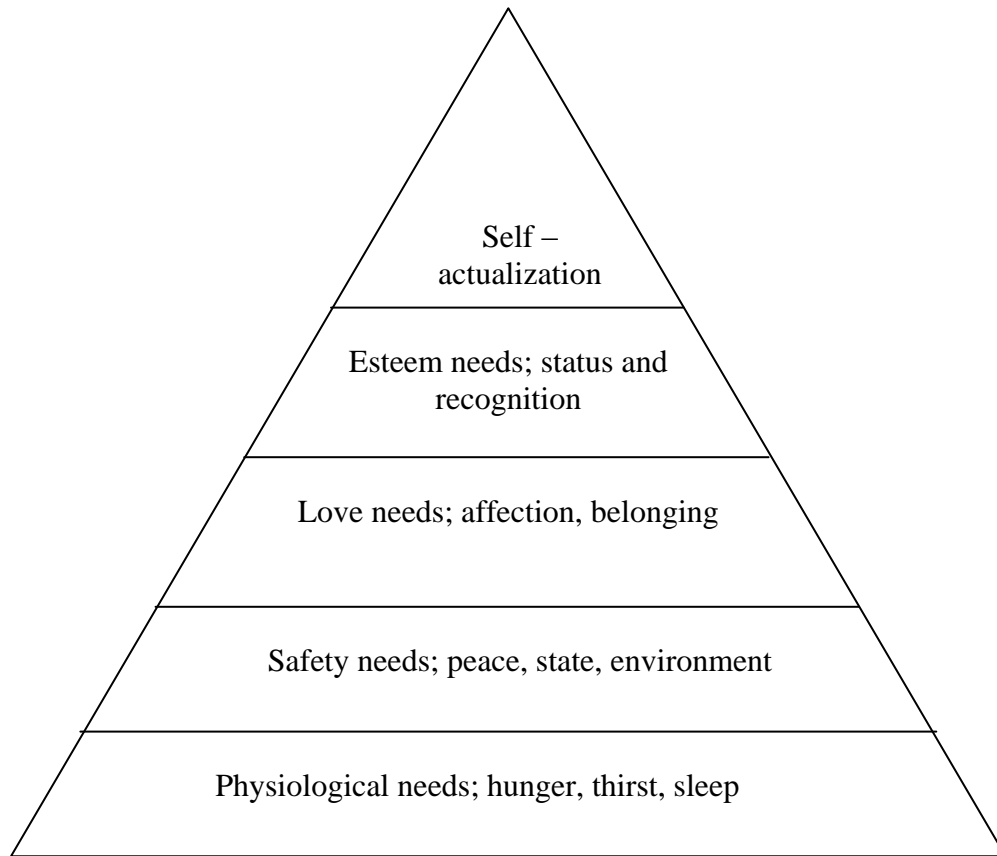


Figure 2.1: Maslow's Hierarchical Model of Basic Needs

Source: Okumbe (1998) Educational Management Theory and Practice

All the above needs were summarized into students' living conditions which include school feeding, sanitation and accommodation basically covering the physiological needs of man. Maslow's theory of needs based on hierarchical model can be applied in a school setting where by hunger, thirst and sleep could have an impact on the well being of a student. Once the physiological needs are met, students can improve on their academic performance.

2.2 Conceptual Framework

The relationship between the independent and the dependent variable is indicated by the conceptual frame work below:

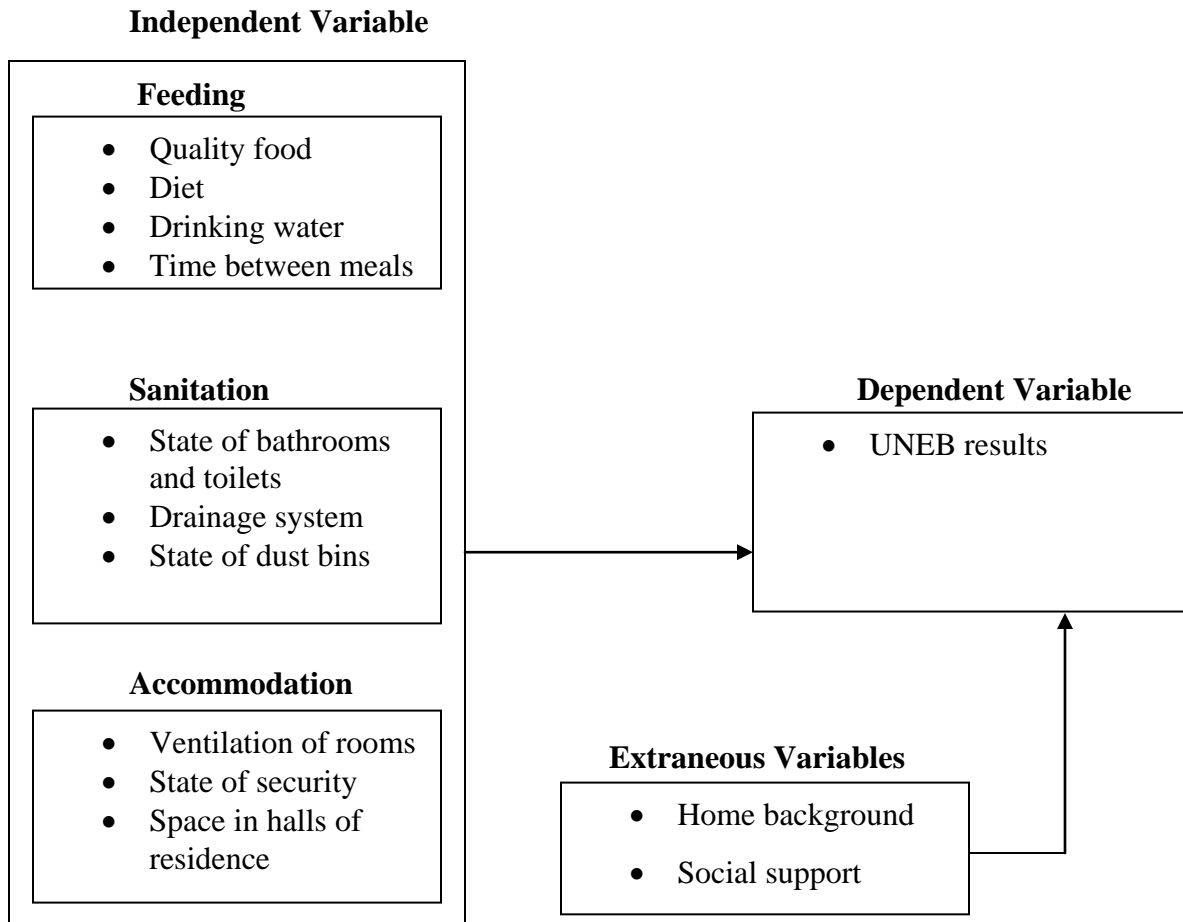


Figure 2.2: Conceptual Framework Showing an Interrelationship between Students' Living Conditions and Academic Performance

Source: Modified from Okumbe (1998:45)

The above figure conceptualizes that students' living conditions have an effect on their academic performance. Feeding, sanitation and accommodation are the primary drives which need to be gratified for learning to take place. In order to achieve academic excellence, the minds of

students should be healthy and should exist in a healthy environment where they can access adequate meals, stay in a clean environment and sleep comfortably. In that way students will be in a better position to excel academically.

2.3 Review of Related Literature

2.3.1 Effect of Feeding on Students' Academic Performance

Feeding is very important in the life of learners since it affects students' thinking and intellectual development. It takes a central position in institutions that operate a residential programme for students (Kabanza, 1997). Food therefore plays an important role in the learning process. Educational institutions in Uganda are required to ensure that students' feeding is well catered for in order to pursue their educational aspirations comfortably (Kajubi, 1992). Nyamwaya and Oduol (1994) in their study about Health Education assert that food is important for good health and proper growth and development of the body. They concluded that if people eat very little or the wrong foods they become weak, get sick easily and could even die. To them, a balanced meal should consist of different types of foods, energizes and protects people from falling sick easily. Kabanza (1997) recommended to institutional authorities that the nutrient value of foods should be considered during food selection to avoid nutritional deficiencies. In view of that, this study sought to establish whether the type of food given to students of secondary schools in Goma Sub County was nutritious.

Mathews (1996), in a study on breakfast cognition found out that a morning meal is strongly related to improved learning, memory and physical health of children. However given the limited financial status of most schools in Uganda, a morning meal is difficult to provide, a factor that

could lead to poor performance of students. Grantham (1998) found out that cognitive function in undernourished children improved after they received breakfast, cognitive function did not change in better nourished children. This demonstrates the potential impact on the educational performance of malnourished ones. However, this study was done in developed educational environments in the United States. This study sought to establish whether the situation was the same in Goma Sub County in Mukono District.

Poll and Matthews (1998) study suggest that omitting breakfast interferes with cognition and learning, an effect which is more pronounced in 'nutritionally at risk' than in 'well nourished' children. Whether breakfast consumption improves school attendance and enhances the quality of students' diet was established in this study. Doris (1994) also reports that there is a relationship between hunger and classroom performance. According to Doris (1994), as the time between meals increases, concentration reduces. In this case, students' attention is directed on how to satisfy hunger and later this can generate anger in the student leading to absenteeism in class either physically, mentally or both. In fact, Kleinman, et al (1998)'s analysis showed that virtually all behavioral, emotional and academic problems were more prevalent on hungry children. Aggression and anxiety were found to be associated with hunger, leading to psychological dysfunction in children.

Kleinman (1998) further observed that hungry students are likely to be depressed, anxious, functioning poorly, have poor grades, absent for school and inattentive in class. Such students lack concentration in class because of the psychological and physiological disturbance inflicted on them by hunger. It is difficult for students to cope with learning demands on empty stomachs

especially in those homes where a good family supper or breakfast before school are considered luxuries. This hunger which causes low concentration in class may be one of the causes of poor performance among students in Goma Sub County, a fact which this study set out to establish.

According to American Medical Association (2002) if the basic necessities of life are provided, parents and educational institutions that invest in the mental and physical health of their children give them a good start in life that can never be replaced. When students understand the importance of Education then learning becomes an easy obligation making passing automatic. It is not a matter of giving food to students; the food should be fully balanced and adequate. Ssewankambo (2006) cited Turner et al (1962) who emphasized that adequate and full balanced diet is vital in ensuring young people's proper growth and learning. When children eat the right foods, sickness is prevented and no retardation is experienced. Whyte (1988) argues that food inadequacies can be indicated by continuous mental, physical, energy and weight losses and thus affects students' academic performance. Kabanza (1997) notes that many schools in Uganda make students eat monotonous diet (posho and beans) which does not provide all the necessary nutrients needed for healthy living. Consequently students have often become sick due to the lack of specific food values in their diets.

Ssewankambo (2006) argued that individuals who use their brains like students need to have proper feeding in order to boost their thinking and reasoning capacity. In other words, students need not to be fed on carbohydrates only but should also eat enough fruits, vegetables and enough proteins. Dimmatteo (1990) sheds more light on the kind of feeding appropriate for a hardworking student. Dimmatteo maintains that every student should maintain sound nutritious

diets by avoiding salty processed foods and limit the intake of fats. They should eat lots of fresh fruits and vegetables and whole grains. Further more, they have to drink low fat milk and eat fish, chicken several times a week. However these nutrients and diet seem to be out of reach by many schools and students.

Accordingly, Awake (2002) points out that eating is the whole essence of life and indeed this confirms the saying that “you are what you eat”. This suggests that students do not need to regard eating as a pleasant experience that only satisfies hunger but also as a way of preventing ill health that could affect their quality of learning Food Agricultural and Organisation (FAO) 1980). Indeed, if students do not feed well, they cannot excel academically. The health of human beings largely depends on the quantity and quality of what they eat and drink.

Fruits and cereals are major sources of vitamins C therefore they should be served on a daily basis. However in most of the schools in developing countries, fruits are not served on a daily basis and in case if any are served, they are too little to satisfy one nutritional requirement of students. Thus, if students do not get all the nutrients required, they may not perform up to the expected standards.

The above literature gives out views on what students should feed on to excel academically and most of the research was carried out in higher institutions of learning (Kabanza 1996, Kasenene 1999, Ssewankambo 2006) and left out effect of feeding on academic performance in secondary schools which this study endeavored to do in Goma Sub County in Mukono District.

2.3.2 Effect of School Sanitation on Students' Academic Performance

School sanitation is very significant in the life of a student as Ddungu (2000) notes that general cleanliness is the foremost requirement for improved sanitation. The floor should be clean, windows washed and walls maintained clean. Attention should be given to general drainage system, water supply and toilet facilities. World Bank (2005) reports that in most developing countries, the sanitary conditions are often appalling, characterized by the absence of proper functioning water supply, sanitation and hand washing facilities. A report by United Nations International Children's Education Fund (UNICEF) (2006) showed that around 5.4 million youths worldwide do not have access to safe drinking water and use mainly unprotected surface water from rivers, ponds or dams. Findings further revealed that over two million youth did not have access to any kind of toilet facility. This lack of safe water, poor hygiene practices and lack of sanitation services were reported to be major causes of morbidity among children. Inadequate access to safe water and sanitation services coupled with poor hygiene practices kills and sickens thousands of people every day and leads to impoverishment and diminished opportunities for thousands more. When it comes to schools, the World Bank (2005) warns that schools that lack access to basic water supply and sanitation services will have an increased incidence of major illness among students. Poor health is an important underlying factor for low school enrollment, absenteeism, poor classroom performance and early school dropout.

The State of Environmental Report (2002) concurs with the above as it reports that sanitation related diseases like malaria, diarrhea, worm infection, eye infection and skin diseases account for roughly half of the entire outpatient visits in the country and the major cause of mortality and morbidity. Medical centers can clearly affirm this since these centers keep on receiving sick

students. The common disease treated is malaria since stagnant water which is a breeding ground for mosquitoes is part of the school compound and this is all because of poor sanitation. Directorate of Education Standards (DES)' Report of 2008 indicated pit latrines in Nakasongola, Mubende, Mpigi and Mityana were inadequate, had no washing facilities, had poor drainage system and lacked safe water for drinking. In Mpigi specifically, the study found out that sanitation in schools was very poor. There was no evidence of regular cleaning and schools did not have cleaning materials most of the urinals were blocked and learners were forced to use outside the urinals and a sight of stagnant urine was common in most schools. It was however not clear whether the same situation prevailed in Goma. This prompted the researcher to investigate whether the findings of DES (2008) were specific to only the districts surveyed or similar findings could be established in Mukono district and specifically in secondary schools of Goma Sub County.

Once sanitation is substandard occupants are likely to spend more time in health facilities. This therefore makes the environment unsafe places where diseases are transmitted with mutually reinforcing negative impacts for the dwellers in this context students, families and schools development. In this regard Ddungu's (2000) study conducted in Rakai pointed out that poor sanitary conditions in which people become accustomed to poor hygiene is dangerous to the psychological upbringing and to the learning process of children.

Njoku's (2002) study that aimed at investigating the Conditions affecting quality living and successful learning revealed that a clean environment allows student time to concentrate on reading books usually in silent environment. These revelations were later confirmed by UNICEF

(2006) which reiterated that good sanitation and hygienic standards have an influence on growth and development of the child, school attendance and the rate of school drop outs. Whether the situation is the same with secondary schools of Goma Sub County was the concern of this study.

2.3.3 Effect of Accommodation Facilities on Academic Performance

The South East Asia conference held in Madras (1955) as cited by Nabawanuka (1997) revealed that accommodation is a vital factor in enhancing students' learning. The same source recommended that if students are to make the most of their educational opportunity, it would be important to have adequate facilities for accommodation, private study, and community life and health recreation. Brook (1965) revealed that good accommodation offers students excellent opportunities for learning and social interaction with fellow students from varying social backgrounds. When students interact they learn new ideas which help them to develop all the three domains of psychomotor, affective and cognitive domain. This will therefore widen their capacity to learn and it takes away the fear to learn therefore making a student ready to learn and even consult teachers or those with knowledge about the subject. Vespoor (1993) was therefore right when he said the quality of Education in Africa has declined because of inadequate facilities, poor student welfare services and lack of experienced senior staff that is able to offer academic guidance and student welfare services to institutions.

According to media reports (Saturday Vision, 5th July 2008) the Ministry of Education and Sports closed down twenty two schools for lack of registered boarding facilities and eight schools for lack of security, safety and sanitation. This puts students at a very high risk. For the

case of secondary schools in Goma, it was not clear whether the same situation prevailed. This study thus set out to investigate this fact.

Kasule (2000) puts more emphasis on insecurity by lamenting that students residing in insecure areas live in constant fear of theft which adversely affects their academic performance. Lyons (1990) firmly contends that noisy and overcrowded residences with inadequate security and lighting at night are the common examples of physical environments that undermine students' ability to engage in their studies. The overcrowded residences of students plus the minimal supervision and insecurity may be one of the factors that affect students' academic performance. The facilities inside the rooms of residence should be adequate. Heath and Mendell (2002) put it that low ventilation rates and less day light may reduce the performance of the occupants. This implies that buildings alone are not enough but they should have proper ventilation and light so as to bring about maximum performance of occupants. The presence of fresh air in rooms of residence also helps to control disease among students so students can attend all lessons hence better performance since absentia is now eliminated. Ventilation therefore in dormitories is of paramount importance.

Something that cannot be neglected when looking at students' accommodation is security of students. Creating a secure environment makes students' reading fun since they can read at any time of the night and this may lead to their academic excellence. Guarantee of students' security against fire outbreak is important. Businge of New Vision on 22nd April 2008 lamented that 93% of Ugandan schools do not have fire extinguishers and that the status of safety and security in schools is so worrying. This led the Minister of Education and Sports to issue a policy requiring

every school to have fire extinguishers, spacious dormitories and lightening conductors. However despite the above recommendations what is on ground is quite different as most schools do not have adequate fire extinguishers, where they exist students do not know how to use them as reported by media. The review of related studies identified several gaps that further convinced the researcher to undertake this study.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter describes the research design that was employed in the study, the area and population, sample size, the techniques of data collection, validity and reliability of instruments, research procedure, data processing and analysis and lastly data presentation.

3.1 Research Design

In this study a cross sectional survey design was used. Both quantitative and qualitative methods were used to collect data from selected schools which would form a representative sample. Amin (2005) argues that this design helps to gather opinions from a cross section of the population. The design was used to obtain information about preference, attitudes, practices, concerns and opinions about students' living conditions and how they affect their academic performance. It was because of the above reasons that the design was found to be appropriate to investigate the effect of living conditions on students' academic performance in Goma Sub County Mukono district. This method was also appropriate because it produces normative data required for quantitative analyses (Leedey, 1989).

3.2 Area and Population

The study was carried out in Goma Sub County situated in the Northern constituency of Mukono District. The study focused mainly on Advanced level students, teachers and head teachers to critically analyze the effect of living conditions in a school on students' academic performance. According to the Annual school survey that was conducted in May 2008, Goma Sub County has

got 21 secondary schools with a population of 8740 students and 350 teachers and 21 head teachers.

3.3 Sample Size

The sample size comprised of 202 students based on Krejcie and Morgan (1970) (See Appendix VIII) table as given by Amin (2004). The respondents selected were from 7 selected schools which were considered in the study.

3.4 Sampling Technique

Stratified Random sampling techniques were used in the study to select students and teachers. This technique was chosen because it has a high degree of representativeness and offers accurate results. Random sampling was used in the study because all students had equal chances of being selected. Head teachers, wardens and senior ladies were purposively selected since they are the ones with more information about students' living conditions.

3.5 Data Collection Tools

3.5.1 Questionnaire

The questionnaire was composed of close ended questions which sought to capture opinions of the respondents on the possible association of variables under the study of students' living condition. The questionnaires were useful instrument for collection of data especially where there was need to protect the privacy of the respondents. This was necessary because confidentiality on the side of participant in the questionnaire was vital in a way of encouraging and maintaining the response to the questions in the questionnaire without getting embarrassed

or intimidated when issuing the instrument. The questions were close ended type of questions to objectify and standardize the observation made by researcher. The closed type of questionnaires was used because they are easy to fill by the respondent and take a short period of time. They also make construction of frequency table easy as Okurut (1986) observed that “a carefully structured question save time, simplify the task of categorizing, tabulating and summarizing the responses”. Questionnaire also helped to collect data from a large sample within a short period of time.

3.5.2 Interview Guide

An interview guide was designed by the researcher with open ended items according to the main theme of study. It was used to guide the researcher to remain focused on the objectives of the study and to get clarity about the different ideas on students’ living conditions. The interview guide was the best method since it allows deeper probing and gives clarification.

3.5.3 Observation Guide

The observation guide helped the researcher to remain focused on the variables being studied.

The researcher visited the schools and observed the conditions of various places like the kitchen, bathrooms, toilets, dormitories and the compound. The researcher also observed the diet of students plus its timing and quality of food served.

3.6 Validity of Instrument

The validity of the instrument was established using the content it entails. The researcher in consultation with her supervisor conducted a first session in which critical assessment of each

item was rated for relevancy. Adjustments on the questions were made until validity was achieved. Content validity was established through expert judges using content validity index (CVI) given by the formula below (Amin, 2005).

$$CVI = \frac{\text{No of items declared valid}}{\text{Total no of items}}$$

$$22/25$$

The CVI was 0.88

3.7 Reliability of Instrument

In the case of reliability, the Cronbach Alpha coefficient method of internal consistency was used to calculate the reliability co-efficient of the questionnaire.

The formula was as follows:

$$\alpha = \frac{K}{K-1} \left(\frac{K - \sum SDi^2}{SDt^2} \right)$$

Where α = the alpha coefficient

$\sum SDi^2$ = sum of the variance of individual items in the questionnaire

SDt^2 = variance of entire questionnaire

K = number of items in the questionnaire

Reliability of the questionnaire was found to be 0.911 therefore warranting the researcher to proceed. (See Appendix VI).

3.8 Research Procedure

Data collection was conducted by the researcher himself and was carried out as follows. After securing an introductory letter from the Dean, School of Education Makerere University the researcher then sought permission from head teachers to administer the instruments in their respective schools, before setting out to collect data. The respondents were informed that the information gathered would serve to enrich matters for policy makers in the Ministry of Education and sports, head teachers as well as other stake holders. Before the distribution of the questionnaires, the researcher worked out a strategy with one of the teachers from each school to help in the distribution of questionnaires. The respondents were given two weeks to fill the questionnaires at their pace after which the researcher collected the questionnaires back and examined to see if the students raised any important element. 240 questionnaires were distributed but only 220 were returned which is 83%. This percentage response was considered adequate for analysis and generalization. After collecting and reviewing the questionnaires for accuracy, interviews were carried out for deeper probing. This exercise took two weeks because some of the officials did not honor the appointments so the researcher had to go back.

3.9 Data Processing and Analysis

The questionnaires were edited for accuracy, consistency and completeness of information before leaving the field. Thereafter coding and summarizing of data was done at the end of each working day. After the instruments were returned, they were checked for completeness and thereafter were coded and then entered in the Statistical Package for Social Scientists (SPSS). The information from questionnaires was presented in frequency tables. The first and second hypotheses were tested using Analysis of Variance (ANOVA) to establish whether there existed

any significant difference in the students' living conditions among the schools while the third hypothesis was tested using the t-test. These methods are appropriate when the researcher has quantitative data and wants to compare the different groups of respondents on major variables

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter presents the findings from the study that investigated the effect of student's living conditions on their academic performance. This study was carried out from secondary schools in Goma Sub County and the focus was on boarding students particularly at Advanced level. The study analyzed the three variables of living conditions (feeding, sanitation and accommodation) and how such affect students' academic performance. SPSS was used to calculate the descriptive statistics, the t-test and analysis of the variance for major variables like feeding and sanitation. A qualitative analysis was done on Key informants and results were presented in frequency tables and graphs.

4.1 Section One: Background Information of Respondents

4.1.1 Demographic Details of Respondents

The background information on students is given in table 1 comprising of gender and class level.

Table 1: Demographic Details of Respondents

		Frequency	Percentage
Gender	Female	115	56.9%
	Male	87	43.1%
Total		202	100.0%
Level	Five	116	57.4%
	Six	86	42.6%
Total		202	100.0%

Source: Survey data, 2009

Table 1 suggests that the majority 115 (56.9%) were female while 87 (43.1%) were male. This meant that girl child education has been given due consideration since girls were more than the boys in the A' level section unlike before when boys dominated the whole system of education.

4.2 Section Two: Description of Respondents' Opinion in Relation to the Questionnaire Items and the Interview.

This section describes the opinions of respondents on the item of the questionnaire relating to the objectives of the study. In the questionnaire the respondents were asked to tick the option that best described their opinion on a four point likert scale ranging from Strongly Disagree (SD) to Strongly Agree (SA).

4.2.1 Respondents' Opinion on Feeding

The first objective was to examine the effect of feeding on students' academic performance. The variables considered which make up feeding were quality of food, balanced diet and the availability of drinking water and table 2 shows their frequency and percentage.

Table 2: Respondents' Opinion on Feeding of Students in Goma Sub County

	Level of Agreement or Disagreement.	Frequency	Percentage
The food served at school is satisfactory.	SD	19	9.4%
	D	29	14.4%
	A	97	48.0%
	SA	57	28.%
The school provides to us a well balanced diet.	SD	95	47.0%
	D	44	21.8%
	A	48	22.3%
	SA	18	8.9%
The school maintains cleanliness in areas where food is stored, prepared and served.	SD	42	20.8%
	D	33	16.3%
	A	82	40.6%
	SA	45	22.3%
The school provides drinking water to students always.	SD	114	56.4%
	D	43	21.3%
	A	33	16.3%
	SA	12	5.9%

Key; SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Disagree

Source: Survey data, 2009.

From table 2, it was analyzed that schools do not provide nutritious meals or a variety of foods to students and this was indicated by 95 (47.0%) students who totally disagreed to the statement that the school provides a variety of foods to students. It should also be noted that food served to students is not satisfactory and this means students may go back to class when they are hungry. This point of view indicated a balanced diet for students plays a great role in facilitating their growth and learning 60.0[15%] and this boosts their thinking hence improving on their academic performance.

The findings also revealed that the main source of water for schools in Goma Sub County was borehole indicated by 111.0 (55%) and may be this is the reason why schools do not boil water since borehole water is purified through the process of percolation.

It was also discovered that 114 (56.4%) students agreed that they are not provided with drinking water which may cause sickness to students' health. The students continued taking unboiled water in many schools since different schools had different sources of water as seen below.

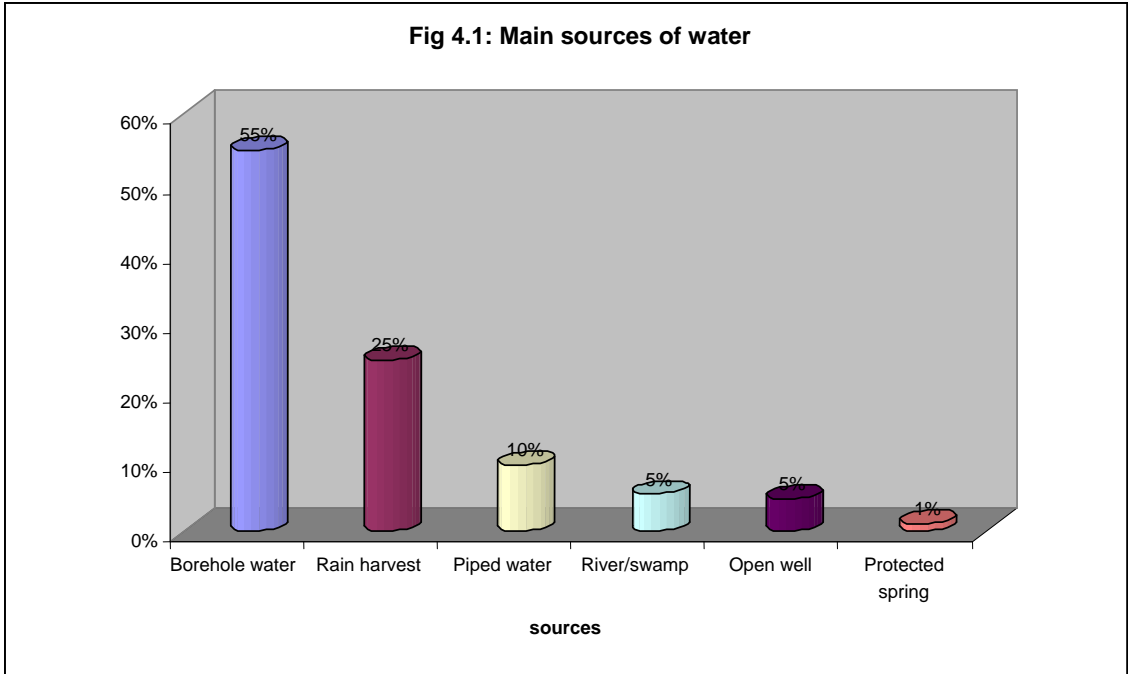


Figure 4.1: Main Sources of Water.

Source: Survey data, 2009

Figures 4.1 reveal the source of water in Goma and are rated according to the main source commonly used. Figure 4.1 suggests that borehole water was the most common source of water used in schools with a percentage of 55. Rain harvest is also another source for most schools and this was evidenced by the presence of tanks located near buildings such that incase it rains, then it can be channeled to the tanks. It was also found out that protected springs are rare in Goma Sub County and are rarely used since its percentage was only 5.

Results from the interviews carried out also showed that students were not given a balanced diet as the school did not have a time table for eating particular foods on particular days. Students in some schools where feeding was very poor revealed that they do not receive vegetables or fruits and it is once in a while that the school menu is changed. The teachers also agreed that there is a

problem of lack of access to safe drinking water since the school can not boil water enough to serve to all students and this on observation was evidenced as there were no containers or anything to show that the school boils and provides drinking water.

Hypothesis 1: Feeding of students does not affect their Academic Performance in Goma Sub County.

The null hypothesis stated “Feeding of students does not affect academic performance of students in Goma Sub County. To test this hypothesis, a Likert type of questionnaires were administered to students on which they were asked to provide their opinions on the different items relating to the independent variable and the dependent variable. The null hypothesis was tested using ANOVA to establish whether feeding has a significant effect on students’ academic performance. The findings revealed that in some schools, students do not receive a balanced diet, drinking water to students and the time between meals is long. All this contributes to the poor academic performance of students. The results were found to be statistically significant and therefore the null hypothesis was rejected. This was interpreted to mean that feeding of students affects their academic performance at advanced level.

Table 3: The effect of feeding on students' academic performance in UACE exams

	N	Mean	Std. Deviation	F	p-value
Poor	80	8.4375	5.52060	8.26	.00
Moderate	8	9.8750	5.81715		
Good	62	12.4032	6.07186		
Total	150	10.1533	6.04428		

Survey data, 2009

The results obtained in the table above revealed that students from schools where feeding was regarded as poor had an average of 8.43 points, where feeding was moderate the average points were 9.87 and where feeding was good the average points were 12.4 meaning that different levels of feeding bring about different levels of academic performance. The computed value of the F-ratio was 8.26 with a p-value of .00 which is less than the level of significance (0.005) implying that feeding has got a significant effect on students' academic performance.

4.2.2 Respondents' Opinion on Sanitation and Academic Performance

The second objective of the study was to investigate the effect of sanitation on students' academic performance. The responses are indicated in the table 4 below.

Table 4: Respondents Opinion on Sanitation in Goma Sub County

	Level of Agreement or Disagreement	Frequency	Percentage
The hygiene in toilets and bathrooms is good.	SD	50	24.8%
	D	53	26.2%
	A	72	35.6%
	SA	27	13.4%
The school provides hand washing facility.	SD	97	48.0%
	D	47	23.3%
	A	41	20.3%
	SA	17	8.4%
Dustbins are always covered	SD	85	42.1%
	D	66	32.7%
	A	32	5.8%
	SA	19	9.4%

Source: Survey data, 2009

Table 4 shows that 24.8% totally strongly disagreed that toilets were good, 13.4% agreed that toilets and bathrooms were good. The students complained that toilets and bathrooms are cleaned once a day and are not totally cleaned because of minimal supervision. So because of the big number of students by afternoon, they are dirty. It was also discovered that most schools do not provide facilities for hand washing after toilet use (48.0%). On observation, the schools which

had hand washing facilities near the toilets, the tanks were empty. This also implies that germs are easily transmitted causing sickness among students.

Also a proportion of students 42.1% said that dustbins are kept uncovered leading to easy spread of diseases. In table 5, the main methods of rubbish disposal are presented.

Table 5: The Main Method of Rubbish Disposal in Secondary Schools of Goma Sub County

		Frequency	Percentage %
Main method of rubbish disposal	Burning	114.00	57%
	Thrown in a composite pit	74.00	36%
	Disposed off by hired garbage collectors	14.00	7%

Source: Survey data, 2009

The results in Table 5 indicate that the main method of rubbish disposal in schools was burning. This was reported by 114 students out of a total sample of 202 representing 57%. Other methods included throwing rubbish into composite pit cited by 74(36%) respondents and on rare occasions rubbish is disposed off by hired garbage collectors.

Data from interviews indicates that teachers are not so committed towards the general cleanliness of the school and it is the prefects who play the biggest role yet do not have the full potential to maintain the school cleanliness as teachers would.

Hypothesis 2: Sanitation does not affect Students' Academic Performance in Goma Sub County.

The null hypothesis stated that sanitation of students does not affect their academic performance in Goma Sub County. The null hypothesis was tested using ANOVA to establish whether sanitation has got an effect on students' academic performance.

Table 6: The effect of sanitation facilities on students' performance in UACE exams

	Schools	Mean	Std. Deviation	F	p-value
Poor	1	7.0769	3.59308	9.30	.00
Moderate	3	8.4531	4.42550		
Good	3	12.1918	6.91548		
Total	7	10.1533	6.04428		

Source: Survey data, 2009

The results in Table 6 show that students from schools where sanitation was poor performed poorly with an average of 7.07 points where as those from schools where sanitation was moderate performed better with an average of 8.4 points and those from schools where sanitation was good performed well with an average of 12.1 points implying that different levels of sanitation bring about differences in academic performance of students. The computed value of the F-ratio was 9.30 with a P-value of 0.000 which is less than the level of significance alpha 0.05 which implies that the results were statistically significant. This also means that sanitation plays a significant role in the academic performance of students hence the null hypothesis was rejected and the alternative accepted.

4.2.3 Respondents' Opinion on Accommodation of Students in Secondary Schools of Goma Sub County

One of the factors that affect students' academic performance is accommodation. Specifically, poor accommodation standards like low ventilation, congestion in dormitories, poor lighting system, poor security and insufficient supply of water may result into poor academic performance. The following items in the questionnaire on accommodation were presented to the respondents to express their level of agreement or disagreement and the results are given in Table 7.

Table 7: Students' Opinion on Accommodation in Goma Sub County

	Level of Agreement or Disagreement	Frequency	Percentage
The school dormitories have enough space for students.	SD	41	20.3%
	D	34	16.8%
	A	67	33.2%
	SA	60	29.7%
There is constant supply of water to all dormitories.	SD	99	49.0%
	D	44	21.8%
	A	38	18.8%
	SA	21	10.4%
The ventilation of our school dormitory is good.	SD	32	15.8%
	D	30	14.9%
	A	83	41.1%
	SA	57	28.2%
Security guards maintain security around the dormitory area all the time.	SD	34	16.8%
	D	29	14.4%
	A	71	35.1%
	SA	68	33.7%
Lighting system is good and constant in all dormitories.	SD	37	18.3%
	D	23	11.4%
	A	63	31.2%
	SA	79	39.1%

Source: Survey data, 2009

Table 7 suggests that students had comfortable living conditions since dormitories had enough space and this was indicated by 60(29.7%) who strongly agreed compared to the 41(20.3%) who disagreed. Still, the ventilation was also good as reported by 57(28.2%) participants. Further, the security of students was also guaranteed (68/33, 3%) but it was found out that the supply of water at the dormitory end is not yet good as the main source of water in schools is a borehole. This means that students have to pump their water and take it to the dormitory and in the process a lot of time is wasted.

The interview carried out with teachers also revealed that when boarding facilities are satisfactory for students, then students' concentration is high since there is no need to worry about anything.

Testing Hypothesis 3: Accommodation of Students' does not affect their Academic Performance.

The third hypothesis stated that accommodation does not affect students' academic performance in Goma Sub County. To test this hypothesis an independent sample student t- test was used to find out whether there exist significant mean variations in students academic performance in relation to their accommodation. The results are summarized in the Table 8 below.

Table 8: Effect of accommodation facilities on students' performance in UACE exams

	N	Mean	Std. Deviation	t	p-value
Poor	47	5.7021	4.13845	7.008	.000
Good	103	12.1845	5.68753		

Source: Survey data, 2009

The results obtained in table 8 above, show that students from schools where accommodation facilities were poor had an average of 5.7 points while those from schools where accommodation facilities were good obtained an average of 12points. The computed value of the t-statistic was equal to 7.008 with a p-value of .000 which is less than the level of significance (0.005) implying that accommodation greatly affects the academic performance of students hence the null hypothesis was rejected and the alternative accepted. This implies that accommodation is so crucial for boarding students in determining their academic performance. Congestion in dormitories results into easy spread of diseases which as a result makes students to miss class a factor that may affect their academic performance.

4.2.4 Respondents' Opinion on Academic Performance in Secondary Schools of Goma Sub County.

Academic performance in this study was the dependent variable. Measuring students' academic performance in addition to the UNEB results, a number of items relating to academic performance were presented to students to provide their responses by indicating their level of

agreement or disagreement on the various indications. Table 9 provides a description of students' opinions.

Table 9: Students' Opinion on Academic Performance in Secondary Schools of Goma Sub County

	Level of Agreement or Disagreement	Frequency	Percentage
Highly interested in the subject am learning.	SD	13	6.4%
	D	11	5.4%
	A	64	31.7%
	SA	114	56.4%
I access a variety of resources which makes classroom exercises easy.	SD	34	6.8%
	D	29	4.4%
	A	68	33.9%
	SA	71	35.1%
I am satisfied with my academic performance.	SD	37	15.3%
	D	23	11.4%
	A	63	31.2%
	SA	79	39%

Source: Survey data, 2009

Table 9 suggests that students had a high interest in learning 114 (56.4%). This means that most students knew why they are in school. Still the study also revealed that students used a variety of resources 71 (36.1%) and were therefore satisfied with their academic performance 79 (39.1%). However in an interview with teachers, it was found out that the resources [library] cannot accommodate all the students at the time they want since it is small. Still also internet was not available for further research in most schools.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the major findings, conclusions and recommendations are presented. The discussion, conclusions and recommendations are presented in accordance with the objectives of the study.

5.2 Discussion of the Findings

5.2.1 Discussion on the Effect of Feeding on Students' Academic Performance in Goma Sub County

The first objective aimed at examining the effect of feeding on students' academic performance. The results of the analysis showed highly significant effect of feeding on academic performance. This was given by the computed value of the F- ratio of 8.26 while corresponding p-value of 0.00 was less than the level of significance alpha 0.05. In schools where feeding was perceived as being good, the performance of students was higher than those in schools where feeding was moderate and poor.

These results are in line with Kabanza (1997) who greatly recommended to institutional authorities that since food plays an important role in the learning process, the nutrient value of foods should be considered during food selection to avoid nutritional deficiencies. The findings are further supported by a study conducted by Nyamwaya and Oduol (1994) who in their study about Health Education found out that food is important for good health and proper growth and

development of the body. This explains why the Education white paper of 1992 strongly recommended educational institutions to ensure that students' feeding is well catered for in order to pursue their educational aspirations comfortably (Kajubi, 1992).

Teachers' opinion on feeding and academic performance concurred with Turner's (1962) idea that a balanced diet is vital in enhancing students' proper growth and learning. This was supported by many teachers during the interview who strongly recommended a balanced diet for students at school. Still in an interview with some school administrators, the findings indicated that owing to financial resource constraints, schools mainly provide posho, beans, rice, sweet potatoes and cassava while meat is served once or a few times in the term to students. Further, the results also revealed that schools rarely provide fruits, vegetables, eggs, fish and pumpkin yet such foods help in boosting the brain and immunity of students.

The findings on feeding in schools greatly revealed that students are not well fed as to the recommended standards of nutritionists given by Kabanza (1997) in the manual for teachers which indicates that a student is supposed to eat protein foods with calcium, vitamin A, B1, B2, B3 and vitamin C. The results indicate that in most of the schools where this study was conducted, there is food deficiency among students a factor likely to affect their academic performance as Whyte (1988) rightly asserts that food deficiency in quality especially among the youth (students) may be reflected in disease explosion.

The findings therefore infer that although a balanced diet is vital in ensuring young people's proper growth and learning, several schools cannot afford to meet this requirement without

increasing school fees. Undeniably, although Awake (1985) recommends that students need more varieties of proteins in order to use their creative potential to the full, for the case of secondary schools in Goma Sub County, the high competition in tuition fees where each school sets minimum possible charges so as to attract as many students as possible, school administrators find it difficult to raise school fees in order to provide a good balanced diet to students hence end up providing them with what is within their means. Results from the descriptive statistics confirmed the above assertion where a large percentage of students reported that they were not provided with a variety of foods as shown by 47.0% who strongly disagreed that schools do provide a variety of foods. This meant that schools do not give a balanced and nutritious diet to students.

In addition to feeding, the study also found out that in many schools, drinking water is scarcely provided. In particular, 56.5% of the students who participated in this study affirmed that schools do not provide drinking water while only 5.9% replied in the affirmative. From the researcher's own observation, there were no boilers, cans or drums for drinking water in most of the schools. These revelations were contrary to what the medical guide (2002) recommends that drinking two glasses of water a day is necessary for proper functioning of the brain. In the end the performance of students who do not have access to clean water is likely to suffer detrimental impacts. As the medical guide (2002) clearly indicates, if the brain and body are denied proper drinking water, students become dehydrated which implies that they will spend more time in sick bays and absentia from class is likely to affect their academic performance.

5.2.2 Discussion on Effect of Sanitation on Students' Academic Performance in Goma Sub County.

The second objective of the study was to find out the effect of sanitation on academic performance. The study hypothesized that sanitation has no effect on students' academic performance. However, with a sig value of .000 less than the alpha 0.05 level of significance, it appears that students felt that school sanitation has a significant role it plays in explaining their academic performance. This was given by the computed value of the F-ratio as 9.30 implying that in schools where sanitation was poor even the academic performance of students was poor compared to schools where sanitation was moderate and good. Specifically, with improved sanitation, students can live comfortably without sickness hence no absenteeism from class a factor that translates into good academic performance. On the other hand poor sanitary conditions lead to poor results.

The findings of this study support Ddungu's (2000) revelations that sanitary conditions in which people become accustomed to poor hygiene are dangerous to the psychological upbringing and to the learning process of a student. Thus, as Ddungu (2000) rightly recommends that schools should always ensure that floors are kept clean, windows washed and walls maintained clean. In addition, attention should be given to the general drainage system, water supply and toilet facilities. This argument coincides with the UNICEF (2005) points out that if sanitation and hygiene are improved, they contribute to reduction in morbidity and mortality among the school population leading to improved enrollment, retention and access to quality education.

In the schools where this study was conducted, majority of the respondents noted that the general sanitation was poor which eventually cause diseases among students leading to academic poor

performance. The World Bank (2005) therefore warns that schools that lack access to basic water supply and sanitation services will have an increased incidence of major illness among students. In line with the findings of this study, the World Bank further cautions that poor health is an important underlying factor for low school enrollment, absenteeism, poor classroom performance and early school dropout.

The results further indicated that 24.8% strongly disagreed that toilet facilities are good and 97% said that schools do not provide water for washing hands after visiting the toilet contrary to what the Ministry of Health keeps on emphasizes. For that reason, Stahl (1987) stresses that once sanitation is substandard, occupants are likely to spend more time in sickbays and hospitals whereas those who dwell in clean environments cheerful and comfortable residences and surroundings are likely to have high ability to perform well in everything.

5.2.3 Discussion on the Effect of Students' Accommodation on Academic Performance in Goma Sub County.

The third objective aimed at establishing the relationship between students' accommodation and academic performance. Like in the previous objectives, the findings of the hypothesis also indicated that accommodation has a significant effect on the academic performance of students and in schools where accommodation facilities are good, the performance of students was also high compared to schools where accommodation facilities were poor. The findings indicated that most schools in Goma Sub County have enough space for their students meaning that there is no congestion in dormitories as supported by 29.7% and 32.2% students who strongly agreed and agreed with the statement respectively. It was also noted the condition of rooms of residence were good and they had proper security in terms of security officers.

The findings of this study are in conformity with those of previous scholars like Madras (1955) as cited by Nabawanuka (1997) that accommodation is a vital factor in enhancing students' learning. In support of this, Brook (1965) also affirms that good accommodation offers students with excellent opportunities for learning and social interaction with fellow students from varying social backgrounds. In fact, when students interact they learn new ideas which help them to develop all the three domains of psychomotor, affective and cognitive domain. This helps them to widen their capacity to learn, takes away the fear to learn thus making students ready to learn and even consult teachers or those with knowledge about the subject. In light of this, it's true as the findings in teachers' interview revealed that congestion in dormitories affects academic performance of students. The findings thus indicate that living in a quite, tidy environment lead to better academic performance.

The above declaration is supported by Lyons (1990) who observed that noisy and overcrowded residences with inadequate security and lighting at night are common examples of physical environment that undermine students' ability to engage in their studies. Acola (1992) sums it up by noting that for students to study well, their living places should have basic facilities like enough rooms, tables and chairs. This eventually enhances academic excellence.

5.3 Conclusions

From the discussion, the following conclusions were drawn.

1. In schools where feeding was poor even academic performance of students was poor compared to schools where feeding was moderate and good.

2. In schools where sanitary facilities were poor, students performed poorly compared to schools where sanitary facilities were moderate and good
3. The state of accommodation in secondary schools in Goma Sub County Mukono district negatively affects students' academic performance.

5.4 Recommendations

To change the above trend, the following were recommended;

1. Secondary schools in Goma Sub County should use their land to establish agricultural and poultry farms to supplement on the food provided to balance the diet.
2. The schools management should include health education in their curriculum to sensitize students especially in rural areas like Goma Sub County on general and personal hygiene.
3. The Ministry of Education and Sports should develop basic requirements and minimum basic requirements and minimum standards for boarding schools and disseminate them to all schools in Goma sub-county and ensure that they are implemented. This would improve on the accommodation for students in rural schools.

5.5 Areas for further research

After the study was carried out in Goma sub-county on effect of students living condition on their academic performance, it was further recommended that there is a need to carry out a study on

1. How parents can share costs of feeding with the school such that students can access a balanced diet to improve on their academic performance.
2. A study on causes of fire outbreaks in schools.

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APPENDICES

APPENDIX I: QUESTIONNAIRE

QUESTIONNAIRE ON HOW FEEDING, SANITATION AND ACCOMMODATION AFFECT STUDENTS' ACADEMIC PERFORMANCE IN SELECTED SECONDARY SCHOOLS OF MUKONO DISTRICT

Dear student,

I am a student carrying out a study on effect of living conditions on student's performance. The study is focused on student feeding, sanitation and accommodation and how such affects their academic performance. I therefore kindly request you to freely respond to all questions in the study questionnaire. All data collected will be treated with high level of utmost confidentiality and will only be used for research purposes.

BIODATA

Use a tick where applicable

Code name of school:

- 1. Sex: Female Male
- 2. Form: Five Six
- 3. Period spent at this school
 - a) Three months
 - b) Two months
 - c) One year
 - d) Two years

A. FEEDING

Tick where applicable in accordance with the options given and described.

SD - Strongly disagree, D - Disagree, A - Agree SA - Strongly agree

	SD	D	A	SA
1. Food served at school is always enough.				
2. Food at school is always served on time.				
3. The school provides drinking water always.				
4. The school always provides to us a variety of foods during the school.				
5. The quality of food served at school is satisfactory.				
6. The area where food is prepared and served is clean.				
7. The dining hall is enough for students.				
8. The school provides breakfast every day.				
9. The food store is well arranged and clean.				
10. The school provides students with a variety of foods.				

B. SANITATION

	SD	D	A	SA
1. Classrooms are swept on a daily basis.				
2. The school compound is always kept clean.				
3. Dustbins are always covered.				
4. The school provides separate toilets blocks for boys and girls.				
5. Bathrooms and toilets are always kept tidy.				
6. There are facilities for hand washing after toilet use.				
7. The school has got a well stocked medical facility.				
8. The dormitory drainage system is always clean.				

9. Please tick the main method of rubbish disposal (you can tick more than one)

- a). burning
- b). thrown in a composite pit
- c). disposed off by hired garbage collectors
- d). others (please name)

10. Please tick the main source of water for the school (please you can tick more than one)

- a). borehole water
- b). piped water
- c). open well
- d). rain harvest
- e). protected spring
- g). river/swamp

C. ACCOMMODATION

	SD	D	A	SA
1 .The school dormitories have enough space for students.				
2. There is constant supply of water to all dormitories.				
3. The ventilation of our school dormitory is good.				
4. Security guards maintain security around the dormitory area all the time.				
5. Lighting system is good and constant in all dormitories.				

D. ACADEMIC PERFORMANCE

	SD	D	A	SA
1. I am highly interested in learning.				
2. The subjects am doing will be important for my future.				
3. I find classroom exercise easy to do.				
4. I am interested in the subjects am doing.				
5. I use a variety of resources such as the library in learning.				
6. I have a strong sense of satisfaction with my academic performance.				
7. I am willing to learn				

Thank you for your time.

APPENDIX II: INTERVIEW GUIDE FOR TEACHERS

1. How many students do you serve food at school?.....
2. What foods do you serve students during a school term?.....
3. Has the school got a time table of eating particular foods on particular days?
4. Does the school provide safe drinking water to students at school?
5. In your view, what are the likely effects of poor feeding on students’ academic performance?
6. Does the school look at sanitation as a priority in its development?.....
If yes what has the school so far done to improve on sanitation in the school...
7. How is general cleanliness carried out at school?
.....
.....
9. Who supervises the general cleanliness of toilets on a daily basis?
.....
10. In your opinion, what are some of the implications of poor accommodation on students’ academic performance?
.....
.....
10. In your view, what should the school administration do in relation to sanitation so as to improve academic performance?
.....
.....

Thank you for your time.

APPENDIX III: INTERVIEW GUIDE FOR THE HEADTEACHERS

Sex of the head teacher: Male Female

1. How long have you worked with this school?

.....

2. What is the total number of students in this school?

.....

.....

3. How many students are residents?

.....

.....

4. What food do you serve students during the school term?

.....

.....

5. In your opinion, what are some of the effects of hunger on students' academic performance?

.....

.....

.....

6. What source of lighting does the schools provide in classrooms and dormitories incase electricity goes off?

.....

.....

.....
.....

7. What do you do to encourage students to improve on their sanitation?

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

8. Who is responsible for inspecting students' toilets and bathrooms?

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

9. Who inspects students' dormitories and how often is it done?

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

Thank you for your time.

APPENDIX IV: INTERVIEW GUIDE FOR DOMESTIC ADMINISTRATORS

1. How long have you worked with this school?

.....

2. How many students do you accommodate here?

.....

.....

3. How many dormitories do you have here?

.....

.....

4. How many students sleep in each room?

.....

.....

5. Apart from posho and beans, what other food do you serve to students?

.....

.....

6. Do sick students get special meals?

.....

.....

7. How often do students clean their toilets and bathrooms?

.....

.....

8. How do you ensure students' security and their property?

.....

.....

.....

.....

9. What are some of the effects of poor accommodation on students' academic performance?

.....

.....

.....

.....

Thank you for your time.

APPENDIX V

OBSERVATIONAL SCHEDULE ON EFFECT OF STUDENTS' LIVING CONDITIONS ON THEIR ACADEMIC PERFORMANCE

		yes	no
1	The hygiene at the kitchen is appropriate.		
2	Are there cans for drinking water?		
3	Is the dining hall well arranged?		
4	Is the compound littered?		
5	Is the compound bushy?		
6	Are there dustbins in the compound?		
7	Are the dustbins covered?		
8	Are classrooms tidy?		
9	Are toilets and bathrooms clean?		
10	Is the drainage system clean?		
11	Are the dormitories well organized?		

APPENDIX VI

ITEM STATISTICS FOR RELIABILITY

	Mean	Std. Deviation	N
Food served at school is always enough	3.2667	1.09978	15
Food at school is always served on time	3.5333	.51640	15
The school provides drinking water always	2.4000	.98561	15
The school always provides to us a variety of foods during the school	2.8000	1.20712	15
The quality of food served at school is satisfactory	3.1333	.91548	15
The area where food is prepared and served is clean	3.3333	.72375	15
The dining hall is enough for students	2.6667	1.23443	15
The school provides breakfast everyday	3.0000	1.00000	15
The food store is well arranged and clean	3.2667	.70373	15
The school provides students with a variety of foods	2.6667	1.34519	15
Feeding	30.0667	6.11166	15
Classrooms are swept on a daily basis	3.8667	.35187	15
The school compound is always kept clean	3.8000	.41404	15
The school provides separate toilets blocks for boys and girls	3.4667	.74322	15
Bathrooms and toilets are always kept tidy	3.1333	.91548	15
There are facilities for hand washing after toilet use	2.5333	1.24595	15
The school has got a well stocked medical facility	3.0000	1.06904	15
The dormitory drainage system is always clean	3.3333	.72375	15

The school dormitories have enough space for students	3.5333	.74322	15
There is constant supply of water to all dormitories	2.8667	1.30201	15
The ventilation of our school dormitory is good	3.5333	.63994	15
Security guards maintain security around the dormitory area all the time	3.2667	1.03280	15
Lighting system is good and constant in all dormitories	3.4000	.82808	15
I am highly interested in learning	3.2667	1.09978	15
The subjects am doing will be important for my future	3.5333	.51640	15
I am interested in the subjects am doing	3.4667	.74322	15
I use a variety of resources, such as the library, in learning.	3.2667	1.03280	15
I have a strong sense of satisfaction with my academic performance	3.4000	.82808	15
I am willing to learn	2.4000	1.05560	15

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.183	2.400	3.867	1.467	1.611	.155	28

The covariance matrix is calculated and used in the analysis.

Cronbach's Alpha	Number of items
0.911	30