

Full Length Research Paper

The Effect of School Feeding on the Academic Performance of Pupils in Primary Schools in Namutumba Sub-County, Namutumba District

Isiko Mohammed

Department of Education, School of Education, Humanities and Social Sciences, University of Eastern Africa, Baraton, Kenya.

Author E-mail: isikomohammed@gmail.com; +256772301168

Received 1 February 2022; Accepted 25 February 2022; Published 30 March 2022

ABSTRACT: The study's main goal was to evaluate the impact of school feeding on the academic performance of students in selected primary schools in Namutumba Sub-County, Namutumba District. The sample size was 606 people, with students having the largest number (569), and the sampling approaches were both purposeful and simple random. The tools included an Interview Guide, a Questionnaire, and a Focus Group Discussion Guide. The information was examined both qualitatively and quantitatively. The study found out that pupils in selected schools can hardly read and write, can hardly interpret text. However, many can read, write, speak English, count and understand. Many teachers reported that they see progress in pupils' literacy and numeracy skills, as well as a general low state of performance. But on a positive note, many primary teachers identified that a pupil can find a main point in a mess of disorganized writing. The study also demonstrated that school-feeding is intended to keep students awake and focused in class. It was also clear that absenteeism was prevalent. It was also reported that in most cases where feeding occurs, they typically feed on oatmeal with few escorts, with the exception of students who bring food from home. The study revealed that most primary schools in Namutumba Sub-Academic County's performance is

far from satisfactory, and that both teacher competency and attention may be lacking. Furthermore, while establishing a strict link between school eating and academic achievement may be difficult, it is clear that not feeding reduces focus, makes courses uninteresting, and causes absence and dislike for studying, among other things. Furthermore, despite poverty, there is widespread and harmful misinformation among parents about the subject of school meals. Furthermore, there is a failure on the part of school administrators to make parents recognize the obvious regarding school-feeding. According to the study, teachers should be taught that teaching requires the ability to adapt radically, develop, and build processes and learning environments. Furthermore, the government, schools, teachers, and students all play a role in ensuring that schools are free of violence and prejudice and that they deliver a gender-sensitive, high-quality education. Finally, the government must fund the development of classrooms at various schools while also continuing to promote school feeding.

Keywords; School feeding, academic performance; primary schools, Namutumba District

INTRODUCTION

According to Emelyn (2016) school feeding date back in the 1900s in two countries of Philadelphia and Boston, having realized a need for states to provide meals to children from poor families who enrolled in schools following laws for compulsory education of all children under 14 which started in the 1900s. Masset, Edoardo,

and Aulo (2013) state that close to 10 years after introducing school feeding, Boston reported that the school feeding enhanced the thinking capacity of children and also made them physically fit and this pointed to sustainable improvement in performance compared to times before.

However, a study on the benefits of school feeding in America by Lieberman, Hunt and Coulson (1976, quoted in Pollitt, Mitchell, and Marita, 2011) specifically investigated into the effects of a breakfast meal among low-income black ghetto children in grades 3-6 over a school year. A breakfast meal at school (N = 281) was compared with an adjacent, non-breakfast school (N = 300). Five psychological tests were administered that reportedly measured ability to concentrate, remember, think abstractly, and work in a classroom. The authors concluded that school breakfast had no long-term effect on performance on psychological tests.

Another study evaluated over 200 school lunch participants and non-participant controls, ages 5 ½ to 10 years, over a three-year period. Indices of school achievement utilized were: school marks as recorded by teachers, scores on intelligence tests, and scores on objective tests of reading and arithmetic (Suwo, 2013). Participants and non-participant controls were reportedly matched exactly for sex, school grade, and by a medical examination and "as closely as possible" for classroom, age, height, weight, economic status, dental conditions, mental ability, and school achievement. The authors concluded that there was no evidence to indicate the school lunch meal accelerated mental or educational development (Pinkus, 2012).

In Africa, the initiative of school feeding starts in 2000 following the United Nations meeting in Dakar to commit itself to the eradication of hunger and attainment of universal primary education. A study by Gasperini (2016) indicates that in conditions of extreme poverty, seasonal difficulties such as drought, or events such as HIV/AIDS, families generally consider it a low priority to get their children to attend school. In such situations Ocha (2018) states that school feedings lead to an increase in enrolment, attendance and retention most especially on the side of girls, who in times of economic crisis or food emergency, are usually the first to be withdrawn from school in order to assist with sibling care and to generate income.

In Kenya, World Food Programme has successfully been providing school meals to about 1.5 million children in form of breakfasts, lunches and snacks not only to improve childhood nutrition and overall health, but also to boost school enrollment, attendance and completion, and on the sides of girls, they can help prevent early marriage and provide them access to better-paying jobs through education (Nallo and Karimi, 2018). In Uganda, school meals are funded by WFP and school feeding more sound in Northern and Eastern than other regions in Uganda, and it has enabled vulnerable households to keep their children especially girls in the classroom bringing about an increase in number girls who attend school by 47% in both regions (Neveill, 2018).

Academic Performance is when a learner, teacher or institution achieves short or long-term educational goals (Hlalele and Nooe, 2015). Countries assess academic performance differently but in Uganda, academic

underachievement is observed using lower scores than average marks in Primary Leaving Examinations or continuous assessments of regular tests and exercises to children (Salmah, Azizah, and Shaifol, 2016). The famous correlates of academic performance are: reading speed, phonetics, reading comprehension, and listening comprehension, individually administered by an examiner and assessed through ranges, percentiles, age equivalents and grade equivalents (Hertler, 2016).

Globally, the problem in academic performance is reported to be increasing in the United States, and some European countries. The latest Program for International Students results from 2012 show that 22.1 % of European students had low achievement in mathematics, 17.8% in reading, and 16.6 % in science (Hertler, 2016). The common attributes for global poor academic performance relate to school factors, i.e. peer group influence, learners' socio-economic background, educational level of parents and language barrier (Hertler, 2016). However, reports keep differing among countries and regions.

Whereas African American Children are academic under- achievers in the United States of America due to: self-sabotage, family influences, low socio-economic status, failing schools, cultural gaps, crime and drug abuse, lack of African American teachers, lack of parental involvement, resistance in middle-class school norms, low teacher expectations, low effort syndrome, anti-intellectualism, lack of priorities, tag line and social services European countries such as Germany reflect academic underachievement at 46% of all learners who sit for examinations per session in a range of subjects due to teacher and home-related challenges (Basque and Dare, 2008).

Educational hints in African countries also reflect increasing cases of poor academic performance indicated by reduction in levels of school grades at an average of 43% for learners who sit for national examinations in a single year in different countries (Binet and Simon, 2013) and this is attributed to financial constraints, school environment factors, home environment, and peer-group influence (Adeyemi, Moradeyo, and Semiu, 2014). However, there are also differences manifested in examples from different African countries.

South Africa's example indicates a high level of reduction in academic performance estimated at 4 out of every 6 learners who attempt academic tasks and attributes are: reliance on second language for learning and reading, and ignoring Language 1 in the education process, discriminatory acts in distributing educational materials which shares poor academic performance of 3 out of the 4 underachievers, and failure to believe in one's self ability to achieve high grades (Basque and Dare, 2008; Amiena, Wynand, and Ravinder, 2014).

In East Africa, the rate of poor academic performance too is estimated at an average of approximately 60% poor performers for each single examination sitting in the

different subjects. A low level of academic performance is registered per examination session in Kenya (46%), Tanzania (62%), and Uganda at 71% with learners attaining very low grades year after year with hardly any hope of significant improvements (Ahmed, 2015). Studies which have tried to harmonize this kind of situation (Amiena, Wynand, and Ravinder, 2014; Clerks, 2013) have always left unchanging situations thus continuing to call for new investigations into what exactly explains the persistent poor academic performance in primary schools.

Uganda operates a primary school education system which is structured into seven years of primary school and pupils are supposed to graduate with the Primary Leaving Examination (PLE) Certificate (Education Act 2008). Excellence in PLE is determined by the achievement levels pupils subscribe to, in their preliminary classes most especially right from primary four, the transitional class to primary seven. The body responsible for assessing pupils' primary academic grades in Uganda is the Uganda National Examinations Board (UNEB). To award primary school academic grades, UNEB uses a grading scale of 1 for division one, 2 for division two, 3 for division three, 4 for division four, U for ungraded results, and X for missed papers of registered candidates. Divisions 1 and 2 indicate candidates who perform above average, while division 3 is performance at average and division 4 is below average, and all marks below division 4 are labeled ungraded (U).

Ideally, all pupils ought to be able to read and write, speak English fluently, count and understand concepts. They should be able to reason a bit, learn skills of life, and perform well at PLE for their supporting continuation of education to the next level. School feeding has been proposed by many as the silver bullet to the improvement of pupils' academic performance. However, low academic performance of pupils is a great problem in selected schools in Namutumba Sub-County. For many years, there have been reports of declining academic performance of pupils in Namutumba District as a whole. The performance of pupils is so bad that pupils can hardly read, write and count and understand concepts. Regarding practical empowerment, about 70% of the parents decry the lack of skills for innovation among pupils after school, when it comes to performance in Primary Leaving Examinations, the situation is alarming. For instance, in 2016, in the whole of Namutumba Sub-County, just one out of the 357 (0.3%) pupils who sat for PLE, passed in division 1 and 80 (22.4%) in division 2. Similarly, in 2017, only one pupil out of 286 (0.35%) passed in division 1, and 99 (34.6%) passed in division 2. In 2018, still only one out of 191 (0.5%) passed in division 1. The result of this phenomenon are very low levels of literacy, low thinking capacity, lack of people who can have confidence to take up leadership and civil service to spearhead service delivery in the Sub-county and in the

District. Obviously, in most schools without feeding, there are performance issues, there are also schools with feeding but with performance issues. There is need, therefore, to assess the effect of school feeding on the academic performance of pupils in selected primary schools in Namutumba Sub-county.

Literature review

When pupils eat breakfast in school, research shows that academic performance improves, most notably in math Adeyemi, *et al.*, (2014). Unfortunately, hunger comes with a stigma that forces many kids to avoid eating the free breakfasts and lunches that are available in school cafeterias. Pupils can feel embarrassed having to come to school early to go to a lunchroom before classes, or getting a free school lunch when their friends have packed lunches or get to go out to eat. Few pupils want to admit they receive free or reduced lunch, and feel ashamed when they cannot pay school lunch fees and such a stigma can lead to more hunger because pupils avoid the available meals and food. Nevertheless, new initiatives are cropping up to make student meals more equitable (Alejandro, 2018).

Globally, O school feeding has been shown to directly increase the educational and nutritional status of recipient children, and indirectly affect the economic and social lives of themselves and their family (Alejandro, 2018). Additionally, school feeding directly addresses the Millennium Development Goals (MDGs) of reducing hunger by one-half, achieving universal primary education, and achieving gender parity in education by 2015 (Brindley, 2015).

A study conducted in Jamaica shows that school meals indeed improve education of beneficiaries (McGregor, *et al.*, 1998). They found that school performance indicators (enrollment, attendance, and dropout rate, repetition of grades, school attainment levels, cognitive function, and classroom behavior) have all improved in response to school feeding. This is because the provision of school meals reduces the parents' cost of sending children to school thereby promoting early enrollment and improving attendance. The more time children spend on learning in response to school meals, the more they will learn and the less they repeat school or dropout. Other studies on school meals have cast doubt and they doubt if there is any positive impact on school participation. Grantham (McGregor, *et al.*, 1998) for instance found that WFP assisted School Feeding (what he calls the standard program) does not increase enrollment at any level compared to control schools.

A study by Mastewal *et al.* (2018) investigated into the effects of SFP on school attendance of children in Boricha District, Southern Ethiopia and specific assessment was made on the effects of SFP on Dietary Diversity Score (DDS), class attendance rate, Body-

Mass-Index for age (BAZ) and height-for-age (HAZ) Z-scores were assessed using multivariable linear regression model. Findings indicated that absenteeism was reported more frequently among non-beneficiaries (91.0%) than beneficiary children (49.7%). The main reported reason for absence among non-beneficiaries was hunger (42.8%) while the leading reason in the other group was domestic workload (27.6%). However, Mastewal et al., (2018) findings lack an explanation about enrollment rate. In this study, the researcher has an assumption that SFP helps to inspire children to attend school and based on the study in Ethiopia, if SFP enhances attendance, then it is ok to establish how it relates to enrollment.

Sylevester and Mahama (2011) conducted a study in Ghana schools and established that school-feeding brought about a general increase in enrolment in programme schools. In their study, Sylevester and Mahama (2011) reported that statistics show excess in yearly enrolment targets set by CRS/Ghana between 2004 and 2007 in that, whereas 153,146 and 137,253 pupils were targeted in 2004 and 2007, actual enrolment was 192,049 and 226,026, showing an increase in 25% and 64% respectively. In a place like Namutumba District where the SFP was just introduced recently, there is need to establish whether, like Ghana, the enrollment rate increases courtesy of the school feeding.

Adelman et al. (2008) reveal that school meals affect the age at entry in different ways. First, the provision of food offsets the cost of educating children by making available additional income for households, and consequently raising the benefits of attending school. When this income effect is large, it can cause households to send their children to school at a relatively younger age thereby minimizing the possibility of late entry. Secondly, the 'neighborhood effect' resulting from School Feeding may also influence the age at entry. That means the act of households to send their children to school earlier with the commencement of School Feeding would create a social pressure and prompt similar action on the part of those who haven't enrolled their children yet (Adelman, et al., 2009).

Another study on 32 Sub-Sahara African countries shows that providing food in school under the Food for Education (FFE) scheme contributed to increasing absolute enrollment in WFP assisted schools by 28% for girls and 22% for boys in just one year (Gelli et al., 2007). After the first year, however, enrollment pattern showed variation depending on the type of program; that is whether the provision of food in school was combined with take home rations or was served alone. In those places where on-site feeding and take-home rations were offered together, girls' absolute enrollment kept on increasing by 30% subsequent to the first year. Meanwhile, schools that provided only on-site feeding has just recorded increase in an absolute enrollment that was same as before the feeding was implemented.

School feeding has been found to effectively increase class attendance because children receive the meal only when they attend school (Dheressa, 2011). The opportunity cost of allowing a child to attend school varies across school days and seasons and this cost could even be higher than the expected benefit. For instance, in places where child labor forms the integral part of agricultural work during a particular day/season of a year, class attendance could be low. In such cases, school meals may or may not encourage attendance depending on how the beneficiaries value them. Thus, the value of the school feeding relative to the difference between the cost and expected benefit of schooling also determines attendance (Adelman, et al., 2009).

Bundy, Burbano, Grosh, Gelli and Jukes (2009)'s study in Ghana established that take-home rations also have the potential to increase attendance levels. Comparing average attendance of girls in ration and non-ration schools, it emerged that attendance was overall higher in ration than in non-ration schools between 2004 and 2006 but dropped in 2007. According to Bundy et al. (2009), the respondents the team interacted with in the field were of the view that takes home rations for girls served as food relief to parents and as a result, parents encouraged their enrolled girls not to default. Similar findings have been reported elsewhere including in Jamaica and Burkina Faso were providing school meals significantly increased attendance and arithmetic scores especially among children who were malnourished.

Adelman et al. (2009) show three aspects of nutrition can influence class attendance. First school meals alleviate short term hunger of school children during the school day by providing more nutrients to the child, providing the child with a meal when he or she would have not otherwise have had one, or replacing a meal that would have been received after school with one during school hours (Ahmed, 2014). Thus, this aspect of nutrition targets for short term impact and enables a child concentrate and learn more. A study of the effects of school breakfast in rural Jamaica show that overcoming school hours' hunger leads to better concentration and learning (Powell and Walker, 1998). Second, school meals may also generate nutritional improvements for a child over long run. The improved nutritional status because of school meals will in turn enhance a child's physiological capacity for learning thereby increasing the benefits of schooling and the child's desire to attend school. Third, school meals can also reduce morbidity through improved nutrition and consequently enhance attendance (Powell and Walker, 1998).

Another study conducted on 814 children in second-through fifth-grade classrooms in rural primary schools in Jamaica where children were randomly assigned to receive a breakfast (576–703 kcal and 27g of protein) or placebo (orange slice with 18kcal) each day for one school year found a small improvement in attendance rates for children receiving breakfast over the control

group (Powell, Walker, 1998).

Adelman et al. (2009) present the interplay between school meals on one hand and grade repetition, learning achievement, and school performance on the other. They show that this effect works in two mechanisms. First, because school meals improve class attendance, children will spend more time learning in school. Therefore, the more time children spend in school, the better they learn and these interplays ultimately result in improved school performance, which thus minimizes the probabilities of dropout. This is however, dependent on other factors such as school quality, availability of learning materials and teacher quality. Thus, unless properly implemented, school feeding has rather the potential to worsen dropouts (Dheressa, 2011). Second, improved nutrition may also enhance pupil participation and performance in the short and over long run. In the short run, school meals could alleviate hunger and make children concentrate and learn better so that school performance will be improved and hence dropout is minimized.

According to Michelon (2006), cognitive abilities are brain-based skills a person needs to carry out any task from the simplest to the most complex. They have more to do with the mechanisms of how we learn, remember, problem-solve, and pay attention, rather than with any actual knowledge. For instance, answering the telephone involves perception or hearing the ring tone, decision taking to answer or not, motor skill -lifting the receiver, language skills - talking and understanding language, social skills - interpreting tone of voice and interacting properly with another human being.

Lawson (2012) noted that providing school children meals has cognitive and health benefits. In a study by Mastewal et al. (2018), respondents observed that SFP improved general health condition and learning outcomes, thus, the combined effect of the health, hygiene and de-worming activities pursued under the SFP resulted in improved health and nutritional status of children, which led to increased retention and educational outcomes in most schools. These results were confounded by socio-economic differences between previously anemic and non-anemic children but even after adjustment for these, the anemic group performed less well. Whether this was because important confounding factors were unidentified or inadequately measured is debated. However, these data raise the possibility that iron deficiency anaemia in infancy does have a longer-term negative influence on cognition (Morley and Alan, 2007).

McGregor and Ani (2001) reviewed a range of longitudinal studies and reported that anaemic infants had poorer cognitive and school performance in the long term, and that short-term iron treatment trials in anaemic children did not show benefits in cognitive development. Logi, Dóra, Sigfúsdóttir, and Allegrante, (2010) made a Cochrane review based on seven randomized controlled

trials reached a similar conclusion, i.e., that short-term iron treatment for anaemia in children less than 3 years old did not improve cognitive development. Sachdev, Gera, and Nestel (2005) included 17 randomized controlled trials in their meta-analysis, and did not find convincing evidence of an association between iron supplementation and treatment for anaemic and cognitive development. However, treating older children with iron deficiency increased IQ significantly. A more recent review and meta-analysis on children aged 6 years and older, adolescents and adults found that iron treatment increased IQ in anaemic individuals, but iron supplementation did not improve IQ in non-anaemic children (Feldman et al., 2012).

METHODOLOGY

Research design

The research design is defined as an overall strategy that a researcher chooses to integrate the different components of the study in a coherent and logical way, thereby, ensuring an effective address to the research problem following the collection, measurement, and analysis of data (Vaus, 2010). This study adopted a descriptive design with mixed methods. The descriptive design was set to establish scores for individual items of school feeding as well as establishing the effect of school feeding on academic performance of pupils in primary schools. The qualitative approach was needed because studies such as ways of people's lives, behaviors, emotions and feelings as well as organizational functions and social movements, among others, are better studied in ways that generate data, which are mainly qualitative. Therefore, it helped in discovering the views, feelings and experiences of especially the pupils, teachers and parents regarding the relationship between feeding and academic performance. Nonetheless, the quantitative approach was also deemed necessary since description was also in terms of measurable characteristics and the quantification of verbal responses to determine the magnitudes of the various variables. In other words, there were numerical data as well in order to analyze and explain the phenomena under study.

Area of study

Namutumba District is approximately 88 kilometres (55 mi), by road, northeast of Jinja, the largest town (Municipality) in the sub-region. It is bordered by the following Districts: Iganga to the South, Bugweri to the South-east, butaleja to the east, Kibuku to the North, and Kaliro to the West. Namutumba Sub-county is one of the 5 Sub-counties in the District, the rest being Nsinze, Bulange, Magada, Ivukula and Nangonde.

The Sub-county has four Parishes, Nakaloke, Nawansagwa, Kigalama, Huba and 40 villages.

Population of the study

The population of the study was mainly children of primary schools whose academic performance is being measured and was of upper primary. These children were mainly Basoga, Banyole and Badama who speak Lusoga, Lunyole and Ludama. The total number of boys and girls in primary schools in Namutumba Sub-County was not well established because the researcher visited only six (6) out of 13 schools that were government aided. The schools were of different foundation bodies, which included Catholics, Anglicans and Moslems. The total of pupils for the schools visited was 2432 boys and 2014 girls.

Sampling procedures

Sample size

Namutumba Sub County has 14 primary schools, namely, Nawampandu, Busona, Namulondo, Namalowe, Kigalama, Muyinda Memorial Namato, Mawungwe, kasimizi, Kizuba, Buwoola, nawansagwa, Igerere and Bulafa. However, this study was carried out in six selected primary schools, namely, Kasimizi, Kizuba, Igerela, Bulafa, Nawansagwa, and St. Augustine Buwoola. The selection of these schools was such that two (2) schools, that is, St. Augustine and Kasimizi, were of catholic foundation, two (2), that is, Nawansagwa and Bulafa on Muslim foundation, and two (2), that is, Kizuba and Igerera, on the foundation of church of Uganda. The most appropriate sample for the study population of 1472 respondents was 302 respondents. However, in this context, each category was considered independently. The sample size totals up to 606 participants, with pupils having the highest sample size of 569. Each of the sample scores for individual categories was generated straight from the mother population in the line category and basing on the table guide for the sample size. The sample size for six head teachers, for instance is below 10, thus all head teachers in six schools participated, and the same applied to parents. With the pupils, an average of 480 was established for each class. Considering the table guide for Krejcie and Morgan, the most appropriate sample for the 480 respondents was 214 thus for each school, 214 pupils participated in the study (Table 1).

Sampling techniques

Cluster sampling was used to select the pupils, parents and head teachers. Purposive sampling was used to

select head teachers directly as heads of schools whose findings contain responses about the entire school environment. Then, after forming the clusters of pupils, simple random sampling was employed to select each pupil after considering the aspect of sex. The technique was also applied to teachers who were randomly selected as per sex.

Data collection methods and instruments

Methods

The methods of data collection included Interview, Survey, Focus Group Discussion, and Documentary review. This means that both primary and secondary data were collected for the research study. Primary data involved obtaining facts as reported by the respondents and observed by the researcher, while secondary data resulted from an examination of available and relevant literature related to the study.

Interview

Face-to-face interview sessions were conducted as one-to-one encounters and were semi-structured, meaning that there was an interview guide designed to elicit data, but with room for probe questions following up on the striking responses of the respondents.

Survey

Survey Research is a quantitative research method used for collecting data from a set of panel or respondents. In a qualitative study, it is always preferable to have detailed responses, with the feelings and sentiments brought out as well. For that matter, interview took precedence. However, not everybody can be available for interview. This method, therefore, was reserved for teachers and pupils.

Focus group discussion

This method was applied to pupils only because, by status, they are the only ones that the researcher could afford to put in groups. The idea was that what individuals do not bring out during the one-to-one interviews, together they can arrive at in a group, and perhaps some people can 'correct' them after hearing what other are saying. In that, way additional and more accurate information can be got. Two groups of eight (8) girls and eight (8) boys were formed in each school. They were mixed in terms of the classes, that is, primary five to primary seven.

Table 1: Study population.

Category	Number of people	Sample
Head teachers	6	6
Teachers	24	19
Parents		
Chairperson SMC	6	6
Chairperson PTA	6	6
Pupils		
Primary five	480	214
Primary six	360	186
Primary seven	300	169
Total	1182	606

Source: Researcher

Documentary review

This involved data collection from various literatures sourced from different publications concerning the area of study. In other words, by examining relevant literature (secondary sources of information) on academic performance and school feeding, the researcher collected views on what other authors had published on the subjects in focus. Among the key sources were reports in schools, minutes of meetings, and other relevant documents as given by the school.

Instruments

Questionnaire

The questionnaire consisted of both close-ended and open-ended questions, with the former limited to a basic minimum since this was a basically qualitative study. Those subjected to questionnaire included teachers and head teachers. The questionnaire was sub-divided into sections to generate views for specific aspects of academic performance and the role of school feeding. The first section comprised demographic characteristics such as age (to establish the maturity level of respondents, gender to indicate the extent to which this study was gender sensitive), education level to indicate that the study was conducted among the learned category of people, occupation and marital status. The following sections comprised questions on academic performance in selected primary schools and school feeding with its related effect on academic performance of pupils in selected primary schools. All in all, 606 copies were sent out and all were returned, representing 100% return, which was almost extraordinary.

Interview guide

Face-to-face interview sessions were conducted using an interview guide designed to elicit data, where respondents were asked questions relevant to the area of study respondents in such an open way that allowed

them to give their views based on the way they witness the situation before and after introduction of school feeding. The interview guide had brief questions designed to elicit information from the respondents as key informants, to supplement on the data collected using questionnaires. This was by probing, which provided the researcher with vital and viable information concerning the phenomenon under study.

Focus group discussion guide

The Focus Group Discussion Guide consisted of topics to be discussed by the groups from the six schools. The topics came from the objectives of the study and were the following:

- The usefulness of school-feedings
- Exactly how school-feeding affects academic performance
- What can be done to involve the families more in promoting school-feeding
- The other factors contributing to poor academic performance of pupils

Each group sat twice and discussed the same topics as the other groups. All this was under the moderation of the researcher and some research assistants. The researcher formulated some questions to guide in the discussions.

Quality control measures

The quality of results was observed through determining whether questionnaires were reliable and valid. These two measures of quality were determined using different approaches as follows.

Validity

Validity is the degree of congruence between explanations of a given phenomenon and realities of the world. In the present study, both construct validity and content validity was used. For construct validity, questionnaires were divided into several sections to

ensure that each section assesses information related to specific objectives and the conceptual framework for the study. For content validity, questionnaires were subjected to a pilot study involving three staffs who asked to evaluate statements in the questionnaire for relevance, meaningfulness, clarity and whether they are free of errors. This facilitated necessary changes on the research instrument thereby enhancing content validity.

Reliability

Reliability is computed through different methods but for this study, questionnaire reliability was checked by using internal consistency method to measure the correlation between each item in the questionnaire and others. A pilot study was conducted by distributing the questionnaire to ten selected people in order to look into the reliability of the questionnaire. Each item in a questionnaire was checked considering that at the end of the study, responses addressed the study objectives.

Data processing and management

Data recorded during interviews were transcribed at the end of each field day in order to have all the data in a standard format. The transcriptions were compared with the original source in order to keep transcription errors to a minimum. The data bases were created and edited and data files created, then the data were organized and summarized. The processing was done manually. For the survey data, a data summary sheet was created whereby a series of columns were created, one for numbering the respondents, one for each question asked, and one for each demographic item. But in order for this to be possible, the elements had first to be coded by assigning them representative numerals. The data were frequently stored on the hard disc, storage disc, printed out as hard copy, with a back-up copy on another disk.

Data analysis

Analysis was an on-going process which went on during and after the data collection phase until the presentation of the findings was done. Regarding the data for this study, there was both quantitative and qualitative analysis independently.

Quantitative data

To ensure completeness, uniformity and accuracy, the collected data were edited. This was aimed at avoiding the omitting of very important data required for the study. This facilitated in the interpretation and establishing of the value attached to numerical variables. The researcher organized the collected data according to the themes of

the study, edited, coded and classified. The data were also sorted and arranged according to the number of times that similar responses had occurred (frequencies) and percentages calculated, which formed the basis for correlation analysis that was used to establish the essential variables like the socio-economic empowerment of women and functional skilling, hence forming the basis for data interpretation, discussion, conclusions and recommendations. The data were then summarized in tables, charts and graphs.

Qualitative data

Qualitative data were analyzed using content and thematic analysis as systematic and well-structured methods. Specifically, the analysis was guided by concurrent flow of activity of data reduction, display, generation of meaning and drawing conclusions right from the start and throughout the process of conducting the research as outlined in the procedure below:

Ethical considerations

Care was taken to protect respondents or participant's image since some of the issues handled pertained to the security of their work. For that matter, respondents/participants were first assured that the study was only for academic purposes and the self-administered questionnaires for that matter were deliberately anonymous. The researcher made sure that what was found out was what was exactly reported and this was done to avoid fabrication of information through presentation of fraudulent results. At this level, the researcher recognized respect for knowledge in pursuit for truth. All this was ensured through asking each respondent to sign a consent form. All respondents and participants were given equal treatment to enable each of them to participate in the study willingly without bias and unrealistic expectations or encourage voluntary participation. Flexibility was also provided for to the extent that if a participant or respondent wished to withdraw from the exercise at any level it was very possible without condition. In terms of confidentiality, every effort was made by the researcher to preserve utmost confidentiality through: assigning code names/numbers for participants on all research notes and documents, keeping notes, and any other identifying participant information under key and lock. In addition, participant data was kept confidential all through since there may be no instances that may oblige the researcher to report on incidents of abuse or suicidal risks. An official permission letter was obtained from the office school of postgraduate studies and research to indicate that this study is purely academic. Participants/respondents' right to privacy was observed by withholding individual

Table 2: Teachers' views on level of academic performance.

	Min	Max	Mean	Std. Deviation
As teachers in our school we participate in educational school-based seminars/ workshops that aim at improving our teaching.	1	4	2.34	.878
Together with our school head teacher we work on our school academic and development plan	1	4	1.72	1.049
I plan for every lesson and design attractive teaching aid for each lesson.	1	4	1.52	.994
Teachers and parents visit each other to find out more about their pupils learning problems at school and home.	1	4	2.23	.980
I offer extra assistance to the learners when it is needed	1	4	1.68	.885
Together with our school administration we ensure that educational quality is a collective responsibility.	1	4	2.65	.688
Teachers do not discriminate learners in the school based on sex, caste, creed or religion.	1	4	2.05	.957
Teacher Self-evaluation	1.00	3.71	2.03	0.72

N = 19

identities to guard against traceability. To cater for anonymity, all respondents and participants were given equal treatment to enable each of them participating willingly without bias and unrealistic expectations. The researcher will have an agreement with respondents on the specific dates, time and convenient place to obtain data. In terms of audio recordings and interviews, the signed consent and assent of respondents was obtained to ensure that findings were obtained without affecting anyone. In addition, respect and dignity were to the respondents. In addition, all researchers and scholars whose work was referred to in this study were quoted and cited appropriately.

RESULTS AND DISCUSSION

Teachers' views on level of academic performance

The purpose of the teacher self-evaluation was to find out how the teachers in primary schools in Namutumba Sub County get involved into professional activities that help them improve and keep them with current knowledge, plan for academic performances in their schools, plan effectively for teaching, carry out remedial work with learners, and also have collective effort as school staff to ensure quality for all learners. Seven items were used to measure teachers' self-evaluation of activities they are involved in, to enhance academic performance in their schools. The rating was validated on a four Likert scale running from strongly disagree (1), disagree (2), Tend to disagree (3), Tend to agree and (4) agree. This rating used a measurement scale: 1.00 – 1.49 disagree, 1.50 – 2.49 Tend to disagree, 2.50 – 3.49 Tend to agree and 3.50 – 4.00 agree, to interpret results. The meaning of the scale above is given as below.

1.00-1.49 disagree is low involvement

1.50 - 2.49 Tend to disagree is fair involvement

2.50 - 3.49 Tend to agree is average involvement

3.50 - 4.00 Agree is excellent involvement

Findings in (Table 2), the only positive teachers' self-evaluation response, was that they are involved into the collective effort or responsibility of working together with school administration to enhance educational quality in their schools (2.65 SD = 688). This mean score interprets a good teacher self-evaluation rating. The ability to lead is dependent on others and the relationships or networks leaders cultivate. Therefore, through team work cultivated by the school administration, by delegating responsibility challenges faced in the teaching system are shared and collective solutions obtained to enhance teacher performance and academic performance. On the other hand, the rest of the results for teacher's self-evaluation indicated a fair involvement into the school activities that are geared into the schools' performance (Mean = 1.65 SD = 885) and (Mean= 2.34 SD =878). The findings therefore had an implication that teacher in Namutumba Sub County do not take active involvement in school programs that help to improve on their product performance in their schools. Research by Basque and Dare (2008) noted that school leaders can engage community members, teachers, students, and parents in school climate improvement work through conversations, meetings, surveys, and creating school-community partnerships. This helps them to get feedback that guides them improvement of their work.

Furthermore, educational studies conducted on performance of learners have put the teacher at the centre of the teaching-learning process especially aiming at improving academic performance. A report published by the Council for Education Policy, Research and Improvement (2003), indicates that the quality of the individual teacher in the classroom most especially his or her ability and effectiveness to influence the learning process using appropriate methods is one of the key determinants of student achievement.

Table 3: Pupils' views on presence of school feeding

Presence of School Feeding	Frequency	Percentage
No	253	44.5
Yes	316	55.5
Total	569	100.0

Source: Field Data, 2019

Table 4: Pupils' views on importance of school feeding

Whether School Feeding is Important	Frequency	Percentage
No	242	42.5
Yes	327	57.5
Total	569	100.0

Source: Field Data, 2019

The report stresses that regardless of availability of resources, rules to be followed, revised curriculum, or a primary source of learning for pupils, the teacher remains a central element. With his or her presence, availability of other things is caused. Other studies such as Binet and Simon (2013) elaborated that stakeholder such as parents, the government educational officials, management within and outside schools including parents, all stress the importance of teachers claiming that school administration and all other key stakeholders need to prepare teachers intellectually to equip them with the most appropriate skills of handling pupils with a goal of enhancing academic performance in primary schools.

School feeding and its effect on academic performance

This addresses issues concerning presence of school feeding, management of the program and the effect of school feeding going by responses of pupils and teachers. Pupils are core when it comes to responses towards performance of pupils. It is against this background that views of pupils concerning presence and effect of school feeding were identified.

Presence of school feeding in schools

The school feeding is meant to keep pupils awake and to maintain a high degree of concentration in class. Pupils who always have meals at school register high levels of concentration while the reverse happens to pupils who do not have meals, either at home or at school. Below is a summary of pupils' responses concerning the presence of school feeding in schools.

From the findings in (Table 3), it is clear that 55.5% of the pupils reported having meals at school. This was strengthened by 63.2% of the teachers who stressed that

pupils feed at school. Pupils and teachers reported that the most predominant range from food carried from their homes in terms of left-over foods out of the supper meals. In all schools, porridge is served during breakfast and lunch time whereby lower primary classes reportedly receive porridge during break time and upper primary classes receive at lunch time. Other sources were food bought by fiends and sometimes food bought using pocket money given to pupils by their parents. Head teachers' responses indicate that school f are existing in schools when parents contribute, or mostly in form of porridge to children attending school with the aim of promoting child education and health. However, the 44.5% representing the non-existence of School Feeding remains the bother whereby the programme is not emphasized. Thus, children come to school and go back with hardly any chances of remembering what was taught. In relation to this study, Hertler (2016) documented that memory is key in making pupils excellent during examinations. Prior to steady memories, pupils are in position to write down information without deviating from the truth.

Importance of school feeding

Stakeholders have always claimed that providing pupils with food enhances their level of understanding and concentration. Asked about the effect of school feeding on academic performance of pupils, different views were generated from respondents as indicated in the (Table 4). As is seen from the (Table 4), the majority of the pupils (57.5%) agreed that SFP had benefits. They argued that if they come to school and have meals, they are tasked to concentrate without worrying about routine hunger, and that having a nutritious meal increases chances of understanding concepts and memorizing concepts taught which in turn directs understanding when revising work. This was in spite of the observation that sometimes it

Table 5: Absenteeism due to lack of school feeding.

Absenteeism due to lack of school feeding	Frequency	Percentage
No	250	43.9
Yes	319	56.1
Total	569	100.0

Source: Field Data, 2019

depends upon the type of food served in schools whereby most schools feed on porridge, which they believe is not nutritious enough to sharpen one's thinking capacity. Relatedly, Alejandro (2018) stresses that overall, school feeding has been shown to directly increase the educational and nutritional status of recipient children, and indirectly affect the economic and social lives of themselves and their family. However, the 42.5% who said 'no' is not a small bit. There is particularly an issue against porridge by the pupils, whereby some argued that it was better to stay without a meal other than eating porridge which leads to dozing and becoming impractical in class. So, while feeding has big benefits, it is another matter when it comes to 'what is fed on'.

Absenteeism in relation to feeding

It has always been alleged that in many primary schools, pupils tend not to come to school due to issues related to hunger. This is in two ways: first, it can imply that pupils fail to come to school because they are involved in garden work to make food available at school. On the other hand, some pupils walk long distances and sometimes become too hungry in that they lose morale to keep going to school daily. From the study, it is clear that the highest percentage of pupils (56.1%) reported that absenteeism was evident and they related it, among other reasons, to lack of feeding at school. In fact, the researcher observed a daily pupil absenteeism of 5 to 15 pupils in primary seven in the different schools (Table 5). This was noted most common in purely rural schools. The primary seven class teachers related the high absenteeism rate to the rain season, with views that some of the pupils are retained at home to help their parent keep up with the rains season in planting and weeding crops. Similarly, Clerks (2013) study in America indicates that nearly 1 in 5 high school pupils is "chronically absent" from classes, and the percentage of pupils who miss at least 15 days in the course of an academic year rises among pupils with domestic problems. The rate of absenteeism is even worse in America such that more than 6.5 million pupils – 13% of all pupils in the U.S. – are chronically absent.

Conclusion

The academic performance of most primary schools in Namutumba Sub-County is indeed far from being

satisfactory. Many people including teachers and head teachers eye performance at PLE forgetting that it is only the culminating point of literacy and understanding. Some pupils fail mathematics because they do not understand English in the question. Both competence and focus of teachers might have gaps. While it may be difficult to establish a strict link between school feeding and academic performance, it remains obvious that not feeding affects everything a human being does. As far as school is concerned, at least it lessens concentration, makes lessons boring, and causes absence and disgust for studying, among others. Therefore, the absence of feeding is a big negative factor in the academic performance of pupils. Given the above conclusion, it follows that the resistance of a parent to provide lunch for their children at school implies that they look at their children in a dichotomous manner, that is, children-at-school who are not their feeding responsibility and children-at-home who are their feeding responsibility. Poverty notwithstanding, this spells great and dangerous ignorance. If these children would remain home, they would eat lunch. The school administrators are in dilemma as to what to do to enforce school feeding. Yet we know that there are schools which have succeeded with the program. One cannot help to conclude that there is weakness as well as fact on the point of these administrators which have failed to make their parents see the obvious. There is a problem of too much politics in our country in everything coupled with naivety and indifference. Politicians normally make weird pronouncements to please people and the naïve take them seriously. This one factor has put school feeding in problems and facilitated poor academic performance which already has other factors bogging it down. The factors affecting the effectiveness of school feeding on academic performance are categorized into administrative or managerial, economic and cultural especially in the case of girls. However, while not much can be done about the culture and poverty especially of parents, surely, something can be done about administrative issues. If there is a gross lack of necessary materials and so many pupils hate their teachers, and nobody seems to realize, then there are administrative and supervisory gaps in the education system.

Recommendations

Teachers need to be informed that like all other human activities, teaching is not just a mere routine, it requires

the ability to adapt boldly, to invent, to create procedures and learning situation. It is therefore necessary to advocate for planning series of interrelated activities designed using materials/resources drawn from the pupil's experimental background in order to enable the pupil to concretize knowledge. Planning as a necessary task enables the teacher to predict the course of events during instruction.

Boys and girls must feel welcome in a safe and secure learning environment. Governments, schools, teachers and pupils all have a part to play in ensuring that schools are free of violence and discrimination and provide a gender-sensitive, good-quality education.

While the vast majority of teachers are caring professionals who put the best interest of their pupils first, some abuse their position of power. Sexual abuse and exploitation by teachers, school staff and others in position of authority is a common practice. Therefore, there should be teacher education and codes of conduct to help change teacher attitudes and behaviours.

Educators, school, district and systems leaders are tasked with the extraordinary responsibility of ensuring all of their pupils are equally provided a high-quality education. Annually engaging stakeholders to analyze data, assess needs and identify root causes, write and implement local plans, and monitor progress is a strong best practice to effectively improve schools.

The number of pupils is increasing year after year due to UPE. Therefore, the government should help and finance the construction of classrooms in different schools as well as continue supporting the school feeding. In addition, teachers need to show interest and attend seminars with fellow teachers from other schools or even consult from friends who teach in schools where pupils perform well and improve teaching methods.

REFERENCES

- Adelman, S., Alderman, H. D., Gilligan, O., and Lehrer, K. (2009). *The Impact of Alternative Food for Education Programs on Learning Achievement and Cognitive Development in Northern Uganda*, mimeo. Washington DC: International Food Policy Research Institute.
- Adeyemi, S., Moradeyo, A. and Semiu, B., 2014. Personal Factors as predictors of academic achievement in colleges of education in South West Nigeria. Lagos: School of education, department of Psychology.
- Ahmed, A. U., 2014. *Impact of Feeding Children in School: Evidence from Bangladesh*. Washington, D.C: International Food Policy Research Institute.
- Alejandro, C., 2018. *Transform a child's life through school feeding*. Rome: World Food Programme.
- Amiena, B., Wynand, L. and Ravinder, R., 2014. *The Impact of Socio-economic Factors on the Performance of Selected High School Learners in the Western Cape Province, South Africa*. Cape Town: Department of Economics, Faculty of Economic and Management Sciences.
- Basque, J. and Dare, S. W., 2008. *Environment and Apparatuship Information*. Journal of Distance Education. London: s.n.
- Binet, W. and Simon, L., 2013. *The manner in which academic underachievement is viewed in most countries in the world*. Washington DC: Bouston Booklers.
- Brindley, L., 2015. *Primary Education in Uganda and the UK*. Kampala: UNESCO.
- Clerks, A., 2013. *Chronic Absenteeism in nation Schools. An unprecedented look at a hidden educational crisis*. Washington DC: US Department of Education.
- Dheressa, D. K., (2011). *Education in Focus: Impacts of School Feeding Program on School Participation: A case study in Dara Woreda of Sidama Zone, Southern Ethiopia*. Addis ababa: Norwegian University of Life Sciences (UMB)..
- Emelyn, R., 2016. *An Abbreviated History of School Lunch in America*. Edinburgh: University of Edinburgh.
- Feldman, H. S. et al., 2012. *Prenatal alcohol exposure patterns and alcohol-related birth defects and growth deficiencies: a prospective study*. New York: Alcohol. Clin. Exp. Res.
- Gasperini, L., 2016. *From agricultural education to education for rural development and food security: All for education and food for all*. Washington DC: Retrieved from <http://www.fao.org/sd/EXdirect/EXre0028.htm>.
- Gelli, A., Meir, U. and Espejo, F., 2007. *Does provision of food in school increase girls' enrolment? Evidence from schools in Sub-Saharan Africa*. Food and Nutrition Bulletin. London: The United Nations University.
- Hertler, S. C., 2016. *Psychological Assessment, Academic underachievement and academic achievement; measuring academic abilities*. Ridgewood: psychodiagnostics.
- Hlalele, D. and Nooe, E. C., 2015. *Academic Underachievement of Learners at School: A Literature Review*. Free State: School of Education Studies, Faculty of Education, University of the Free State.
- Janelle, R. (2011). *Why is Academic Success Important? Applied Science and Technology Scholarship*. Saskatchewan: School Boards.
- Lawson, T. M. (2012). *Impact of School Feeding Programs on Educational, Nutritional, and Agricultural Development Goals*. London: Michigan State University.
- Lieberman, H. M., Hunt, I. F. and Coulson, A. H., 1976. *Evaluation of a ghetto school breakfast*. J. Am Dietet. A. Washington DC: Diet Assoc.
- Logi, K., Dóra, A., Sigfúsdóttir, I., and Allegrante, J. P. (2010). *Health behavior and academic achievement among adolescents: the relative contribution of dietary habits, physical activity, body mass index, and self-esteem*. Washington DC: Health Educ. Behaviour.
- Masset, L., Edoardo, B. and Aulo, G., 2013. *Improving community development by linking agriculture, nutrition and education: design of a randomised trial of "home-grown" school feeding in Mali*. Washington DC: GTR.
- Mastewal, Z., Samson, G., Carol, J., and corresponding, A. (2018). *School feeding program has resulted in improved dietary diversity, nutritional status and class attendance of school children*. Washington, D.C: National Center for Biotechnology Information.
- McGregor, G., Chang, S. M. and Walker, S. P., 1998. *Evaluation of school feeding: Some Jamaican examples*. New York: American Journal of Clinical Nutrition.
- Michelson, P. (2006). *What are Cognitive Abilities and Skills, and How to Boost Them?* Washington DC: <https://sharpbrains.com>.
- Morley, R. and Alan, L., (2007). *Nutrition and cognitive development*, MRC Childhood Nutrition Research Cent. London: British Medical Bulletin.
- Nallo, A. and Karimi, A. M., 2018. *School Meals Success in Kenya, Thanks to WFP's support, a school meals program in Kenya has achieved a new milestone—its own graduation*. Nairobi: <https://www.wfpusa.org>.
- Neveill, C., 2018. *Lifting Lives in Uganda With The Promise of a School Meal*. Washington DC: World Food Program.
- Ocha, R., 2018. *Study on Sustainable School Feeding Across the African Union*. Addis Ababa: <https://reliefweb.int>.
- Pinkus, M. S., 2012. *A study of pupil breakfast and lunch habits and behavioral patterns in certain Louisiana elementary schools following implementation of the National Breakfast Program*. New York: s.n.
- Pollitt, E., Mitchell, G. and Marita, G., 2011. *Educational Benefits of the United States School Feeding: A critical Review of Literature*. New York: <https://ajph.aphapublications.org>.
- Powell, C. A. and Walker, S. P., 1998. *Nutrition and education: a randomized trial of the effects of breakfast in rural primary school*

- children. London: The American Journal of Clinical Nutrition.
- Sachdev, H., Gera, T., and Nestel, P. (2005). Effect of iron supplementation on mental and motor development in children: systematic review of randomised controlled trials. London: Public Health Nutrition.
- Salmah, A., Azizah, Z. A. and Shaifol, Y., 2016. The mediating role of academic self-efficacy in the relation between parent-adolescent relationship and academic performance. Perpustakaan: Universiti Putra Malaysia.
- Suwo, Y., 2013. Supply Chain Analysis of Different School Feeding Models: Botswana, Côte d'Ivoire, Ghana, Kenya and Mali. Partnership for Child Development.. London: Food and Agricultural Organization.
- Sylevester, G., and Mahama, S. (2011). Running an effective and sustainable school feeding programme: Key factors to consider. Accra: <https://www.researchgate.net>.
- Vaus, D., 2010. Organizing Your Social Sciences Research Paper: Types of Research Designs. London: Sage.