School Feeding Programme and Pupils academic performance in Government aided primary schools in Omoro District

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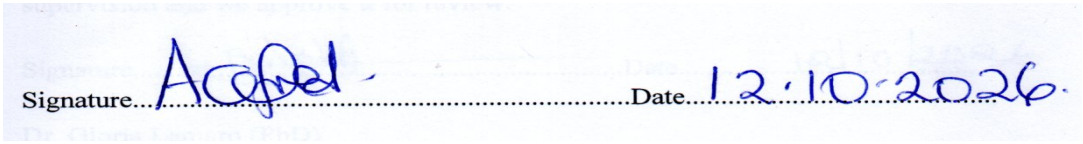
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July, 2026

Declaration

I Fred Acura, hereby declare that the research report titled "*School Feeding and Pupils academic performance in primary schools in Omoro District*" is my original work and has never been submitted for any award in any institution of higher learning or University.



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Approval

This is to certify that this research report titled *"School Feeding and Pupils academic performance in primary schools in Omoro District"* was written under our guidance and supervision and we approve it for review.

Signature.....Date.....12/10/2026

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Signature.....Date.....12/10/26

Dr. George Opio (PhD)

Dedication

This thesis is dedicated to my beloved wife Akullu Jolly who took over management of my home affairs when my mind was masked up by research work. Your endless encouragement and understanding have been my anchor. Your support has empowered me to overcome challenges and celebrate achievements, while your faith in my abilities continually fuels my passion.

To my cherished children Ojota Orish, Okello Emmanuel Moses, Acomo Loyce, Konga Hellen your academic performance challenged me to complete the course aware that you would need my financial support in a near future.

To my mother, Acomo Sophia, I still value your constant constructive criticism and comparison that provoked me to leap ahead of my brothers and sisters in academic realm.

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I recognize Joel Osteen an American Pastor for his sermon of encouragement especially anology of David and Goliath. Challenges are meant to prove God's strength, humility, fortitude, acidulousness, modesty, prudence, honesty and other civic cardinal virtues are significant in achievement.

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Abstract

The study examined the influence of school feeding programme on pupil's academic performance in government aided primary schools in Omoro District. The study was guided by the following specific objectives namely, to assess the status of school feeding programme in government aided primary schools in Omoro district; to assess the level of pupils academic performance in government aided primary schools in Omoro district and to determine the relationship between school feeding programme and pupils academic performance in government aided primary schools in Omoro District. The study employed mixed method research approach and convergent research design. Data was collected from a sample of 275 respondents using questionnaire and interview guided. Data was analyzed using SPSS version25 for quantitative data and qualitative data using thematic analysis. Findings revealed that most government aided primary schools in Omoro was implementing school feeding programme (M=3.45 SD 4.71). findings for research question two also showed that there was high level of academic performance among pupils in government aided primary schools in Omoro District ((M=3.11 SD=4.4). Findings on research question three revealed strong positive significant relationship between school feeding programme and pupils academic performance in government aided primary schools in Omoro District (r=.62 p,0.01). It was concluded that school feeding programme was a very fundamental psycho educational intervention that enhances academic performance in primary schools in Omoro District and we recommend that government should allocate more resources to support school feeding programme in primary schools.

Chapter One

Introduction and Background to the study

1.0. Introduction

Pupils' academic performance in primary schools remains a vital indicator of educational quality and national development. While efforts to improve access through policies such as Universal Primary Education (UPE) have significantly increased enrollment, learning outcomes in many low- and middle-income countries, including Uganda, remain alarmingly low. Empirical studies continue to highlight the persistent gaps in literacy, numeracy, and critical thinking skills among primary school learners, especially in government-aided schools where resources are often limited (UNEB, 2022; Uwezo, 2021). Factors such as inadequate infrastructure, insufficient teacher training, large class sizes, and poverty-related challenges such as hunger and child labor have been shown to undermine academic achievement (Asimwe & Musoke, 2023; Kiwanuka & Mugerwa, 2022). Nonetheless, innovative interventions like school feeding programmes have demonstrated promising outcomes in improving both attendance and performance, particularly when integrated with broader educational support systems (Bundy et al., 2021; Watsemba, 2024).

This chapter presents the background to the study, problem statement, purpose of the study, specific objectives, research questions, scope of the study, significance of the study and the conceptual framework.

1.1 Background to the study

1.1.1 Historical background

The academic performance of learners in primary schools has long been a central focus of educational research, policy, and reform globally. Performance in early schooling years often predicts future educational attainment and socio-economic success. Across different global regions, a mixture of policy reforms, socio-economic conditions, curriculum development, teacher training, colonial histories, and investment in school infrastructure has influenced historical patterns of learners' academic performance. This review traces the historical trajectory of academic performance in primary schools across England, the United States, China, Africa (broadly), East Africa, and Uganda. The foundation of academic performance tracking in English

primary schools' dates back to the Elementary Education Act of 1870, which made primary education compulsory for children aged 5–10. Academic performance during this period was measured through standardized inspections and later by national assessments (Gillard, 2011). The introduction of the 1944 Education Act marked a turning point by establishing free and universal primary education, and the tripartite system encouraged stratification of learners by ability, impacting performance expectations.

In the 1980s and 1990s, academic performance became more formalized with the Education Reform Act (1988), which introduced a national curriculum and standardized assessments at Key Stages. Studies by Tymms & Merrell (2007) found that these changes led to measurable improvements in literacy and numeracy among primary school children. However, issues of inequality persisted, with socio-economic disparities contributing to performance gaps. By the early 21st century, initiatives such as Every Child Matters framework and Pupil Premium funding targeted underperformance among disadvantaged groups. Overall, while England has seen substantial improvements in average performance, disparities by region and socio-economic status remain.

In the USA, academic performance in primary schools has historically mirrored the nation's diversity and decentralization. Prior to the 20th century, education was locally governed, and academic performance standards varied widely. With the Elementary and Secondary Education Act (ESEA) of 1965, performance monitoring became a federal priority. This Act, particularly Title I, aimed to close the achievement gap for disadvantaged students.The No Child Left Behind Act (2001) further amplified focus on standardized testing in reading and mathematics. According to the National Center for Education Statistics (NCES), performance in early grade reading and mathematics improved marginally over the 2000s, but achievement gaps based on race, ethnicity, and income remained stubbornly persistent (Reardon, 2011). Recently, initiatives such as Common Core State Standards and Every Student Succeeds Act (2015) have attempted to balance accountability with equity. Longitudinal studies suggest moderate improvements in performance, especially in literacy, but critics argue that overemphasis on testing has narrowed the curriculum and stressed learners and teachers alike.

The Chinese primary education system has experienced tremendous reforms since the founding of the People's Republic of China in 1949. Initially, literacy and basic numeracy were the main focus, with massive campaigns aimed at universalizing primary education. By the 1980s, with the onset of economic reforms, China began emphasizing educational quality and performance (Tsang, 2000). China's 9-Year Compulsory Education Law (1986) led to increased enrollment and performance monitoring, especially in urban areas. Academic performance in subjects like mathematics and science saw significant improvements, with Chinese students often topping international assessments like TIMSS and PISA (OECD, 2018). However, disparities between urban and rural areas persist. Research shows that students in urban regions with better-resourced schools consistently outperform their rural peers (Zhang, 2014). Government policies like the Balanced Development of Compulsory Education have attempted to close this gap, but challenges related to teacher quality and socio-economic inequality endure.

Across Africa, colonial legacies have heavily shaped the structure and outcomes of primary education. Under colonial regimes, primary education was often limited and racially segregated, with limited emphasis on learner performance or quality outcomes. Post-independence, many African nations prioritized access over quality. The Education for All (EFA) movement and the Millennium Development Goals (MDGs) of the 1990s and 2000s greatly expanded enrollment but highlighted concerns about poor academic performance and learning outcomes. Studies by UNESCO (2015) noted that while enrollment increased dramatically, reading and numeracy skills remained low across sub-Saharan Africa. Factors such as underqualified teachers, large class sizes, insufficient instructional materials, and language barriers have contributed to low academic performance. Despite increased investment through initiatives like the Global Partnership for Education, performance improvements remain modest in most African countries.

In East Africa, historical trends in academic performance reflect both colonial influences and recent educational reforms. Countries like Kenya, Tanzania, and Uganda inherited examination-oriented systems from British rule, which emphasized rote learning over critical thinking. Kenya's Free Primary Education (FPE) program launched in 2003, significantly increased access but was followed by a decline in quality, as evidenced by stagnating or falling performance in national exams (Bold et al., 2017). Tanzania's abolition of primary school fees in 2001 had similar outcomes. Research by Uwezo (2014) found that many children in East Africa complete several

years of primary education without acquiring basic literacy or numeracy. In response, countries have implemented teacher training reforms and competency-based curricula aimed at improving learning outcomes, though success has been mixed.

Uganda's history of academic performance in primary education is closely tied to the Universal Primary Education (UPE) policy introduced in 1997. Prior to UPE, access was limited and performance uneven. UPE led to a surge in enrollment but also created significant challenges in maintaining quality. Studies show that learner-teacher ratios skyrocketed, classrooms became overcrowded, and instructional resources were overstretched (Deininger, 2003). National Assessment of Progress in Education (NAPE) reports from Uganda have consistently shown low achievement in literacy and numeracy among primary learners, particularly in rural and disadvantaged communities (UNEB, 2014). The implementation of Thematic Curriculum (2007), designed to teach in local languages and emphasize learner-centered approaches, had potential but faced implementation challenges. Recent interventions such as school feeding programs, teacher incentive schemes, and performance-based financing have aimed to improve outcomes. Nonetheless, Uganda continues to grapple with poor learning outcomes, as reflected in high dropout rates and low proficiency in core subjects.

The history of the school-feeding programme (SFP) in Uganda is closely tied to efforts aimed at improving educational access, retention, and learning outcomes, especially in rural and food-insecure regions. School feeding in Uganda can be traced back to the early 1980s, when a few localized initiatives were introduced by religious and humanitarian organizations to support children in conflict-affected areas, particularly in Northern Uganda. However, these efforts were limited in scope and lacked government coordination. A significant turning point came in 1983, when Uganda began collaborating with the World Food Programme (WFP) to implement structured school feeding programmes in selected districts. The WFP provided food rations primarily maize meal, beans, and vegetable oil to schools in regions facing chronic food shortages, such as Karamoja, Acholi, and West Nile. These interventions were designed to improve school attendance, reduce dropout rates, and support recovery in post-conflict settings. In the 1990s and early 2000s, following the introduction of Universal Primary Education (UPE) in 1997, the need for a comprehensive school feeding strategy became more apparent. With increased

enrollment came challenges of food insecurity, especially among children from poor households who attended school on empty stomachs, affecting concentration and performance.

Despite these needs, Uganda does not yet have a nationally funded school feeding policy. Instead, the current SFPs are largely donor-driven, with WFP and other development partners supporting targeted regions like Karamoja, which continues to suffer from extreme poverty and malnutrition. The government's role has mainly been through policy guidance and encouraging home-grown school feeding models, where communities contribute food or funds to sustain meals at school. In recent years, the Ministry of Education and Sports, with support from partners like FAO and UNICEF, has developed frameworks and guidelines aimed at institutionalizing school feeding. The National School Health Policy (drafted in the 2010s) includes provisions for school nutrition, though implementation remains inconsistent due to financial and logistical constraints. In summary, while school feeding programmes in Uganda have evolved over several decades starting with emergency aid to more structured interventions there remains a pressing need for a sustainable, government-led national strategy that integrates nutrition, education, and agriculture for long-term impact

1.1.2. Theoretical background

The influence of school feeding programmes on pupil's academic performance is deeply rooted in well-established psychological and educational theories. One of the most relevant is Maslow's Hierarchy of Needs Theory (1943), which provides a comprehensive explanation of how meeting basic human needs is fundamental to learning and academic achievement. This theory suggests that unless basic physiological and safety needs are met, individuals are unlikely to achieve higher levels of functioning such as cognitive engagement and self-actualization both of which are essential for academic success. Abraham Maslow, an American psychologist, proposed a five-level hierarchy of human needs arranged in the following order: physiological needs, safety needs, love and belonging, esteem, and self-actualization. At the base of the pyramid are physiological needs, including food, water, and sleep. Maslow argued that these foundational needs must be satisfied before individuals can focus on learning, problem solving, or achieving personal goals (Malow,1943)

In the school environment, this theory implies that a child who is hungry cannot learn effectively. Hunger impairs attention span, memory, energy levels, and mood all of which directly affect academic performance. When children attend school without having eaten, they are more likely to feel fatigued, anxious, and distracted, making it difficult to focus on learning tasks. Therefore, school feeding programmes, by ensuring that children receive at least one nutritious meal per day, directly address these fundamental physiological needs. Maslow's theory finds practical application in the design and implementation of school feeding programmes, particularly in low-income countries where food insecurity is prevalent. In Uganda, for instance, many learners in rural schools come from households that cannot consistently provide adequate meals. As a result, these learners face challenges concentrating in class, have higher absenteeism rates, and often drop out of school prematurely. School feeding helps mitigate these challenges by improving children's energy levels and motivation to attend school (Maslow, 1943)

Studies have consistently demonstrated that providing school meals improves learners' classroom participation, punctuality, and test scores. According to Adelman et al. (2008), school meals increase both cognitive functioning and academic outcomes, particularly among malnourished children. The World Food Programme (WFP) has similarly reported that school feeding significantly boosts school enrollment and reduces dropout rates in vulnerable regions, aligning with Maslow's assertion that learning is only possible when basic needs are met. Maslow's theory does not end with physiological needs; it also highlights how safety, belonging, and esteem are necessary for learners to reach their full potential. School feeding programmes can also indirectly contribute to these higher needs. For example:

- Safety and Security: Regular school meals provide a sense of routine and predictability, fostering emotional security among learners. This reduces stress and creates a stable learning environment.
- Belonging and Esteem: Children who receive meals feel included and valued, which can build self-esteem and a sense of community. This encourages them to participate more actively in school activities and social interactions, both of which enhance learning.

To Maslow, fulfilling all these needs paves the way for self-actualization, where learners strive to achieve their academic and personal best. This top level of Maslow's pyramid where individuals

engage in meaningful, self-driven learning and achievement can only be reached when foundational needs, such as food, are not a daily concern. Maslow's Hierarchy of Needs provides a strong theoretical framework linking school feeding programmes to pupils' academic performance. By meeting pupils' basic physiological needs, school feeding removes a critical barrier to education and enables pupils to focus on higher-order learning.

1.1.3. Conceptual background

According to the Ministry of Education and Sports of Uganda (2013), a school feeding programme is defined as: "The provision of meals or snacks to learners at school to improve their nutritional status, promote school attendance, retention, concentration, and overall learning outcomes, especially for vulnerable and food-insecure children."(MOES, 2013). This definition emphasizes the multi-dimensional purpose of school feeding in Uganda, linking it not only to nutrition, but also to education access and quality. The MoES encourages homegrown and community supported feeding models, especially in rural and hard-to-reach areas.

Bundy et al. (2009) define "School feeding programmes are targeted social safety nets that provide food to children in schools, aiming to improve children's education, health, and nutrition while fostering local agricultural development and reducing short-term hunger." (Bundy et al, 2009). This definition focuses the inter-sectoral impact of school feeding, especially in low-income settings where it contributes to both human development and food security.

Tomlinson, M. (2007) define "School feeding is a development intervention that supplies food to children in educational institutions to increase enrollment, enhance attendance, and improve cognitive performance, especially in regions facing chronic hunger and poverty." Tomlinson emphasizes school feeding as a strategic development tool, especially in food-insecure regions, with strong implications for both access and quality of education (Tomlinson, 2007)

In this study therefore school feeding programme will be operationalized to mean, Frequency of meals provided (e.g., daily, weekly), Type of meals (e.g., porridge, lunch, fortified snacks), Quality of food given, provision of nutrition and Source of food (e.g., home-grown school feeding vs. externally funded programmes). This definition allows researchers, policymakers, and program

managers to systematically measure and evaluate the implementation and impact of school feeding initiatives

Learners' academic performance refers to the extent to which a student has achieved the specific learning objectives, competencies, and skills outlined in the national curriculum, as measured through continuous assessments, examinations, and classroom participation." (MOES, 2016). This definition emphasizes curriculum alignment, competency development, and assessment standards as key components of academic performance in the Ugandan education system.

Yusuf (2012) Defines "Academic performance is the outcome of education the extent to which a student, teacher, or institution has achieved their educational goals, commonly measured through grades, test scores, and examination results." (Yusuf, 2012). Yusuf views academic performance as an output-based measure, primarily evaluated through quantitative assessments such as grades and tests. Olatoye (2019) defines "Learners' academic performance refers to the level of proficiency demonstrated by students in specific subject areas, typically assessed through formal tests, continuous assessment, and terminal examinations." (olatoye, 2019). This definition highlights the subject-specific nature of performance and the use of multiple forms of assessment to evaluate proficiency. Farooq et al. (2021) define "Academic performance is the measure of student achievement across various academic subjects, reflecting the effectiveness of teaching, student effort, and institutional support, often quantified through standardized tests and grade point averages (GPA)." (Farooq et al, 2021). Farooq and colleagues emphasize that academic performance is influenced by both individual and institutional factors, making it a multi-dimensional construct.

In this study therefore Learners' academic performance is defined as the measurable level of achievement by a student in educational tasks, typically assessed through scores obtained in class tests, end-of-term examinations, continuous assessments, and national standardized exams (PLE). This operational definition allows for consistent and objective measurement of academic performance in educational research and school evaluations.

1.1.4. Contextual background

Academic performance in primary schools remains a critical indicator of the effectiveness of Uganda's education system, particularly in achieving national goals such as quality education for all, human capital development, and socio-economic transformation (Kabuye, 2019) The concept of academic performance in the Ugandan context is generally understood as the learner's ability to demonstrate acquired knowledge, competencies, and skills as prescribed by the national curriculum, and it is commonly measured through continuous assessments, end-of-year exams, and performance in national examinations like the Primary Leaving Examinations (PLE) (Opolot,2020).

Uganda has made significant strides in improving access to education through initiatives such as Universal Primary Education (UPE), launched in 1997. As a result, primary school enrollment surged from 2.5 million in 1996 to over 8.8 million by 2020 (UBOS, 2021). However, academic performance has not matched the pace of increased access. According to the Uganda National Examinations Board (UNEB, 2022), while the national PLE pass rate was 74.4%, performance in critical subjects like English and Mathematics continues to be poor, especially in rural and underserved areas. Multiple studies attribute this underperformance to challenges such as inadequate infrastructure, large pupil-teacher ratios, limited instructional materials, teacher absenteeism, and food insecurity. A 2018 World Bank report found that 60% of P6 pupils could not read and comprehend a basic paragraph, and numeracy skills were significantly below expected grade levels.

The situation in Northern Uganda, a region historically affected by decades of civil conflict and displacement, presents even more concerning statistics. According to UNEB (2021) and Uwezo (2019), learners in Northern Uganda consistently perform below the national average. For example, in 2020: Only 59.3% of candidates in Northern Uganda passed the PLE, compared to the national average of 74.4%. In subjects like English and Science, less than 45% of learners achieved a satisfactory grade (Division I or II). Dropout rates remain high, with over 30% of children leaving school before completing the primary cycle (MoES, 2020). Contributing factors include the legacy of conflict, poverty, food insecurity, poor school attendance, and lack of qualified teachers.

Schools in Northern Uganda also suffer from inadequate supervision, insufficient instructional time, and limited parental involvement.

Omoro District, carved out of Gulu District in 2016, represents a microcosm of the broader challenges in Northern Uganda. As a rural, post-conflict district, Omoro faces chronic educational underperformance. According to the Omoro District Education Office (2023). The average PLE pass rate in 2022 was only 51.7%, significantly below the national average. Less than 10% of pupils obtained Division I in the district, with a majority falling in Division III or U. Pupil-teacher ratios in some schools exceed 1:80, far above the recommended 1:40. The district has over 40% pupil absenteeism on average per term, with many children missing school due to household poverty, domestic responsibilities, or lack of meals. Moreover, access to learning materials is limited, and school feeding programmes are nearly non-existent in most government schools, despite evidence that hunger negatively affects learners' concentration and academic engagement (Lakony, 2023)

1.2. Problem statement

Despite Uganda's commitment to achieving universal and quality primary education through the implementation of the Universal Primary Education (UPE) policy in 1997, learners' academic performance in primary schools remains alarmingly low, particularly in rural and underserved regions. While national enrollment has significantly increased from 2.5 million pupils in 1996 to over 8.8 million by 2020 (UBOS, 2021) the corresponding improvement in academic outcomes has been minimal. According to the Uganda National Examinations Board (UNEB, 2022), only 74.4% of learners nationally passed the Primary Leaving Examinations (PLE) in 2021, with consistent underperformance in core subjects such as English and Mathematics. The situation is particularly dire in Northern Uganda, a region still grappling with the long-term impacts of civil conflict, poverty, and weak infrastructure. UNEB data reveals that in 2021, the PLE pass rate in Northern Uganda was only 59.3%, significantly below the national average. Learners from this region also record some of the lowest literacy and numeracy competencies in the country (Uwezo, 2019). Poor learning outcomes are attributed to factors such as high pupil-teacher ratios, inadequate learning materials, food insecurity, teacher absenteeism, and limited parental involvement. In Omoro District, one of the newly created districts in Northern Uganda, the

academic performance of primary school learners presents a worsening trend. According to the Omoro District Education Department (2023), the average PLE pass rate in 2022 was only 51.7%, and fewer than 10% of candidates obtained Division I. The district continues to experience over 40% pupil absenteeism, with many children missing school due to hunger, long walking distances, and domestic chores. Classrooms are overcrowded, with pupil-teacher ratios exceeding 1:80 in many public schools, well above the national standard of 1:40. These challenges indicate a critical learning crisis that threatens the future of children in Omoro District and Northern Uganda at large. The persistently low academic performance undermines the broader goals of education for national development, poverty reduction, and human capital formation. There is, therefore, an urgent need to investigate and address the underlying causes of poor academic performance in primary schools, particularly in disadvantaged regions, to inform policy and practical interventions aimed at improving learning outcomes.

1.3. Purpose of the study

The purpose of the study was to investigate the impact of school feeding on pupil's academic performance in government aided primary schools in Omoro District.

1.4 Specific objective

This study was guided by the following specific objectives

(i) To examine the status of school feeding in government aided primary schools in Omoro District

(ii) To assess the level of pupil's academic performance in government aided primary schools in Omoro District

(iii) To establish the relationship between school feeding and pupils academic performance in government aided primary schools in Omoro District

1.5 Research questions

(i) What is the status of school feeding in government aided primary schools in Omoro District

(ii) What is the level of pupil's academic performance in government aided primary schools in Omoro District

(iii) What is the relationship between school feeding and pupils' academic performance in government aided primary schools in Omoro District

1.6 Scope of the study

1.6.1 Geographical scope

The study was conducted in Omoro district. Omoro district is located in Northern Uganda. It was curved from Gulu district in 2016 and shares borders with Gulu district to the North, Pader district to the east, Oyam district to the Southeast and Nwoya district to the west and southwest.

1.6.2 Content scope

The study focused on the status of school feeding, the level of pupils' academic performance and the relationship between school feeding and pupils' academic performance in government aided primary schools in Omoro district.

1.6.3 Time scope

The study focused on the period between 2022-2025, this is because it was a period when most schools in Omoro implemented school feeding programme (lakony, 2023)

1.7 Significance of the study

This study on the school feeding programme and pupils' academic performance in government-aided primary schools holds significant value for multiple stakeholders within the education system. To policy makers**,** the findings provide empirical evidence necessary for formulating, reviewing, and implementing comprehensive national school feeding policies that can improve educational access, equity, and quality. It informs them on how school meals contribute to reducing dropout rates, increasing attendance, and enhancing learners' concentration and cognitive development.

For the Ministry of Education and Sports**,** the study supports strategic planning and resource allocation aimed at integrating nutrition interventions into educational programs. It provides a basis for strengthening inter-sectoral collaboration between education, health, and agriculture in promoting child development.

To school administrators, the study highlights the importance of organizing and monitoring school feeding initiatives to ensure they are effectively implemented and positively impact pupils'

learning outcomes. It also encourages data-driven decision-making and accountability in school management.

For teachers, the study demonstrates how school meals improve pupils' attention span, classroom participation, and overall academic engagement, thus enhancing the teaching-learning process.

For parents**,** it provides insight into the added value of school feeding beyond nutrition, reinforcing the importance of supporting such programs either through contributions or community involvement.

The study also empowers pupils by advocating for their right to a conducive learning environment that includes adequate nutrition, which is foundational for academic success. Ultimately, the study promotes inclusive education and socio-economic transformation through improved academic performance, especially among vulnerable learners in government-aided primary schools

1.8 Conceptual Framework

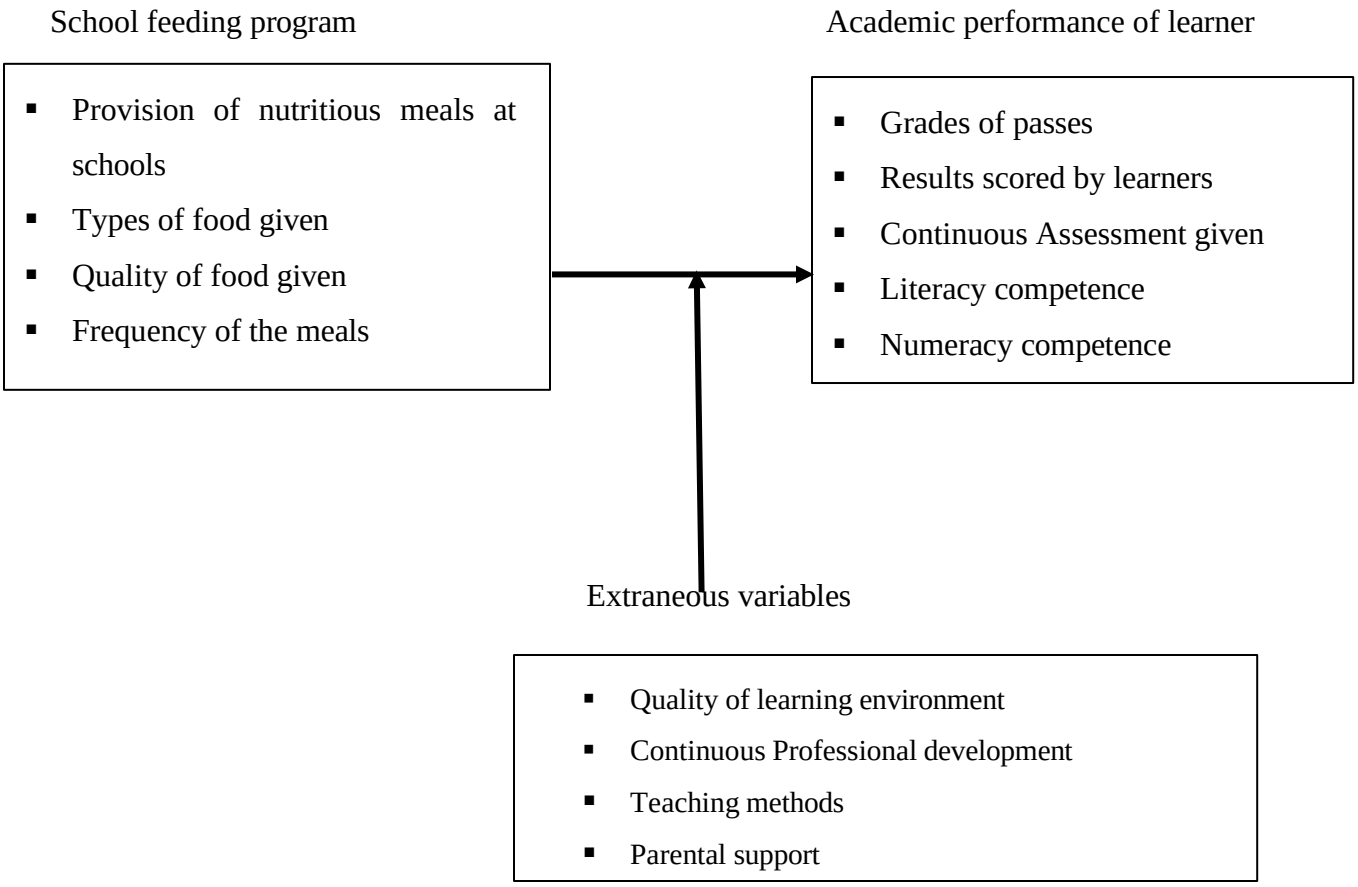


Fig. 1.0. Conceptual framework

Source: Maslow's hierarchy of needs theory (1943)

The conceptual frame work above shows an assumed relationship between school feeding (provision of nutritious meals, types of food given, quality of food give and the frequency of food given) would influence academic performance of learners in primary schools in terms (grades of passes, results scored by the learner, record of continuous assessment, literacy and numeracy competences supported by extraneous variable of teacher's quality and availability of funds moderate the relationship between school feeding program and academic performance of learners in Government primary schools. For instance, when pupils are provided with lunch and breakfast, cases of late coming, sleeping in class is reduced as well they pay attention to details while you are teaching.

Academic performance is not only determined by school feeding programs but also the quality of learning environment, continuous professional development, teaching methods and support from the parents. For instance, the qualification and competency of teachers, mod of assessment and methods of teaching encourages learners to understand and perform well compared to learners with good infrastructures at school without above qualities.

Chapter two

Literature review

2.0 Introduction

This chapter reviewed literature according to study specific objectives namely; to examine the status of school feeding in government aided primary schools, to assess the level of pupil's academic performance in government aided primary schools and to establish the relationship between school feeding and pupil's academic performance in government aided primary schools.

2.1 Status of school feeding programme in government aided primary schools

School feeding programmes (SFPs) have become an essential component of educational interventions aimed at enhancing pupils' access, retention, and academic achievement, particularly in developing countries. Empirical studies across various low-income contexts reveal that these programmes play a crucial role in addressing short-term hunger, reducing absenteeism, and improving learning outcomes. In sub-Saharan Africa, where food insecurity remains prevalent, school feeding has been recognized not only as a nutrition intervention but also as a powerful tool for promoting human capital development. The World Food Programme (2023) estimates that over 60 million children in Africa receive school meals, yet coverage remains uneven, with rural and marginalized regions often excluded. Despite international advocacy and regional policy commitments, implementation challenges continue to hinder the full realization of the potential benefits of school feeding (WFP, 2023; Bundy et al., 2009).

Empirical research from Ethiopia, Ghana, and Kenya consistently illustrates the positive correlation between school feeding and improved learning indicators. A longitudinal study conducted in Southern Ethiopia by Beyene et al. (2023) found that pupils receiving daily school meals had significantly higher attendance rates and retention compared to non-beneficiaries. On

average, beneficiary students attended school five more days per term and recorded better literacy and numeracy scores. In Ghana, a study by Abizari et al. (2023) demonstrated that school feeding improved both academic scores and classroom participation, particularly among children from food-insecure households. These findings are mirrored in Kenya, where Njiru (2024) examined the Food4Education initiative and found that daily provision of subsidized hot meals increased enrollment by 12% and reduced dropout by 7%, particularly among girls. The empirical evidence supports the conclusion that SFPs enhance cognitive performance, reduce malnutrition-related learning deficits, and foster inclusive educational access, especially when programmes are community-supported and linked to local agricultural systems.

Uganda's experience with school feeding in government-aided primary schools is more limited, despite a clear need. Empirical data from various districts suggest that a lack of consistent feeding programmes correlates with poor attendance and low academic performance. A study conducted in Bukomansimbi District by Nabukeera and Ssemwanga (2024) found that schools without feeding programmes recorded higher rates of absenteeism, with over 60% of pupils missing classes at least twice a week due to hunger. In contrast, pupils in schools with consistent feeding showed greater concentration, higher test scores, and reduced early dropouts. Similar patterns were observed in Mbale District, where Watsemba (2024) found that lunch provision improved mean academic performance by 8% across a sample of 15 government-aided primary schools. These findings reinforce the hypothesis that hunger directly impairs classroom participation and that low-income families are unable to reliably provide meals to support their children's education (MoES, 2023).

The Karamoja region in Uganda offers one of the well-documented cases of a regionally targeted school feeding initiative. Initiated with support from the World Food Programme and the Ugandan government, the Karamoja Home-Grown School Feeding Programme (HGSFP) serves over 250,000 pupils across 320 schools, providing daily porridge and lunch. An impact evaluation conducted by WFP (2024) reported improvements in school attendance (by 10%), gender parity in enrollment, and exam pass rates. Moreover, the programme generated indirect benefits including the stimulation of local agricultural markets and community participation in school management (WFP, 2024). However, the success of Karamoja's model is not representative of the national landscape. In most parts of Uganda, particularly central and western regions, government-aided schools lack formal school feeding structures, and parents bear the burden of providing food, often inconsistently. The absence of a national school feeding policy, coupled with limited government funding and infrastructure, undermines efforts to scale such initiatives beyond selected districts (CSBAG, 2024).

The role of parental and community involvement in school feeding has also received empirical attention. A study by SNV Netherlands Development Organisation (2024) evaluated parent-led milk feeding schemes in 45 government-aided schools across northern and central Uganda. Findings indicated that consistent milk provision significantly improved children's alertness and reduced morning absenteeism. Teachers also reported improved pupil engagement in morning lessons, suggesting a strong relationship between food access and cognitive performance. However, the study also found that in schools where parents struggled to contribute, pupil participation dropped, highlighting the inequities in cost-sharing models. These results underscore the need for equity-sensitive school feeding frameworks that do not exclude vulnerable children based on parental income. The current reliance on parent contributions, particularly in regions

without donor support, raises sustainability concerns and may inadvertently deepen educational inequality among low-income learners (SNV, 2024).

Despite clear empirical evidence of the benefits of school feeding, Uganda's national approach remains fragmented. A 2024 policy review by the Civil Society Budget Advocacy Group (CSBAG) revealed that only 33% of pupils in government-aided primary schools receive school meals. The study further noted that 73% of these schools lacked basic kitchen facilities, while over 80% had no access to safe cooking energy or storage infrastructure (CSBAG, 2024). The lack of institutional coordination between the Ministry of Education and Sports, Ministry of Agriculture, and Ministry of Health was identified as a significant bottleneck to scaling the programme. Furthermore, no formal monitoring and evaluation framework exists to track the effectiveness of existing school feeding interventions. Without reliable data on performance outcomes, budget allocations, and pupil health indicators, the government remains ill-equipped to design a comprehensive and scalable school feeding programme. The draft national school feeding policy, first introduced in 2013, is yet to be adopted, and its operationalization remains delayed (MoES, 2023; WFP, 2024).

In conclusion, empirical literature strongly supports the argument that school feeding programmes positively influence academic performance, attendance, and retention in government-aided primary schools. Experiences from Ethiopia, Ghana, and Kenya provide useful models, while Uganda's own regional interventions, particularly in Karamoja and pilot districts, affirm the feasibility and impact of structured feeding initiatives. However, significant gaps persist, particularly in policy formalization, infrastructure development, equitable financing, and nationwide implementation. The lack of a coherent national framework continues to limit the

potential of school feeding as a transformative educational intervention. Addressing these challenges requires political will, multi-sectoral collaboration, and investment in data systems to inform programme design and impact measurement. As Uganda aims to improve its education outcomes under the Universal Primary Education policy, embedding a well-structured, government-supported school feeding programme is both a strategic and moral imperative.

2.3. Level of pupil's academic performance in government aided primary schools Academic performance in government-aided primary schools is a critical metric for evaluating the effectiveness of educational interventions in developing countries. In Uganda and other sub-Saharan African nations, academic performance remains central to policy discussions due to its role in shaping human capital development and socioeconomic mobility. Government-aided primary schools, typically serving low-income and rural populations, face systemic challenges that impede learners' academic achievement, including underfunding, teacher shortages, poor infrastructure, and widespread poverty. Empirical evidence from the region underscores the persistent learning crisis, marked by low literacy and numeracy proficiency, high dropout rates, and regional disparities in performance outcomes (Uwezo, 2021; MoES, 2023).

Numerous studies have highlighted the low levels of learning achievement among pupils in government-aided schools in Uganda. According to the National Assessment of Progress in Education (NAPE) conducted by the Uganda National Examinations Board (UNEB, 2022), only 38.9% of Primary Six pupils demonstrated proficiency in literacy, and just 41.2% in numeracy. These figures show a decline from previous years, exacerbated by school closures during the COVID-19 pandemic. A longitudinal study by Asimwe and Musoke (2023) across five government-aided schools in Wakiso District revealed that fewer than 50% of pupils could solve

age-appropriate mathematical problems or comprehend grade-level English passages. The researchers linked the poor performance to inadequate teaching materials, large class sizes, and insufficient instructional time, echoing findings from other districts in Uganda (Nabukeera & Kaggwa, 2023).

Empirical evidence also demonstrates regional disparities in academic outcomes. In Northern Uganda, where post-conflict recovery is ongoing, pupil performance remains significantly below the national average. A study by Ocitti et al. (2023) in Gulu and Omoro Districts found that less than 30% of Primary Five pupils met basic literacy benchmarks. The authors attributed this to lingering trauma, limited parental involvement, and low teacher morale. Similarly, Oyet and Arach (2022) observed that pupils in government-aided schools in Kitgum District performed poorly on Primary Leaving Examinations (PLE) due to frequent teacher absenteeism, under-resourced classrooms, and poverty-induced absenteeism among pupils. These findings suggest that improving academic outcomes in such regions requires not only school-level interventions but broader social support mechanisms.

Teacher quality has emerged as a consistent predictor of academic performance. Several studies emphasize the strong association between qualified, motivated teachers and pupil achievement. According to Muwanga-Zake et al. (2021), pupils taught by Grade V-certified teachers consistently outperformed those taught by Grade III teachers, particularly in English and Mathematics. However, government-aided schools often rely on underqualified or temporary staff, especially in rural settings. For example, a study by Namukasa and Kyambadde (2023) covering 40 government-aided schools in Eastern Uganda reported that 26% of teachers had not received refresher training in more than five years. The lack of ongoing professional development and

performance-based supervision was found to correlate with lower learner achievement, especially in schools where instructional practices were outdated or teacher absenteeism was rampant.

Parental involvement and home learning environments are also empirically linked to academic performance. A recent study by Twinamasiko and Asiimwe (2022) involving 20 government-aided primary schools in Western Uganda established that pupils whose parents regularly engaged with schoolwork scored on average 12% higher on classroom assessments. However, in most government-aided schools, especially in impoverished areas, parents often lack the literacy or time to support learning at home. Furthermore, poor nutrition, child labor, and domestic responsibilities undermine pupils' concentration and attendance. As such, interventions that strengthen school-community partnerships and promote parental engagement are essential for raising performance levels (Kanyesigye & Mugume, 2023).

The school learning environment also plays a central role in academic performance. Empirical studies point to the negative effects of overcrowded classrooms, inadequate sanitation, and lack of instructional materials. For example, Kiwanuka and Mugerwa (2022), in a study of 60 schools in the central region, found that schools with a pupil-classroom ratio above 70:1 had significantly lower average test scores in English and Science. Similarly, UNEB (2022) reported that only 45% of government-aided schools had access to functional libraries, and fewer than 30% had adequate science kits. This resource inadequacy limits experiential and competency-based learning, especially in subjects that require hands-on engagement. Such findings reinforce the need for infrastructural investment and equitable resource distribution to improve academic achievement in government-aided institutions.

Government initiatives such as the Universal Primary Education (UPE) programme have increased access to schooling but have not yielded proportional gains in academic performance. A study by Musisi and Muwonge (2023) indicated that although UPE led to a surge in enrollment, it also strained the education system. Their survey in Mukono and Luwero Districts revealed that schools with the highest pupil-teacher ratios under UPE conditions scored the lowest in national exams. The researchers noted that the lack of capitation grants, weak inspection systems, and limited community involvement in school governance contributed to poor academic performance. These findings align with critiques from the Education Policy Review Commission, which emphasizes the need to shift focus from enrollment statistics to learning outcomes (MoES, 2023).

Technology integration has been suggested as a potential driver of academic improvement, though evidence from government-aided schools remains limited. A pilot study by Nakatumba and Ssenkumba (2023) assessed the impact of digital learning tools in ten schools in Kampala and Mukono. Results indicated modest improvements in reading fluency and mathematical accuracy, particularly among P4 and P5 pupils who accessed tablets at least three times per week. However, challenges such as erratic electricity supply, limited teacher ICT skills, and lack of digital content alignment with the national curriculum hindered scalability. These findings suggest that while edtech holds promise, infrastructural and training investments are prerequisites for its successful implementation in government-aided schools.

In conclusion, empirical literature reveals that academic performance in government-aided primary schools in Uganda remains below national and international benchmarks. Factors such as teacher quality, school infrastructure, parental involvement, and regional disparities play significant roles in shaping learning outcomes. While interventions like UPE have expanded

access, they have also introduced quality concerns due to overstretched resources and systemic inefficiencies. The literature calls for a multidimensional approach that includes investment in teacher development, infrastructural improvement, policy reforms, and strengthened school-community partnerships. For future policy and research, there is a need to focus on equity-driven strategies that improve academic outcomes without widening existing performance gaps among regions and income groups.

2.3 Relationship between school feeding programme and pupil's academic performance in government aided primary schools

School feeding programmes (SFPs) have increasingly gained attention as a multifaceted intervention to improve child nutrition, school attendance, and academic achievement. These programmes are designed to provide nutritious meals or snacks to pupils during the school day, thereby addressing hunger and its negative effects on cognition and learning. The relationship between SFPs and academic performance has been studied extensively across different contexts, demonstrating varying degrees of impact influenced by programme design, implementation quality, and contextual factors. This literature review examines empirical evidence from global, regional, and local studies to understand how SFPs affect academic outcomes in primary schools, particularly in low- and middle-income countries.

Empirical research from sub-Saharan Africa highlights the positive influence of school feeding on attendance and learning outcomes. In Ethiopia, a randomized control trial by Berhane et al. (2023) found that pupils receiving daily school meals had a 12% higher school attendance rate and demonstrated significant improvements in literacy and numeracy scores compared to controls. These findings align with studies in Kenya, where Njiru (2024) reported that the Food4Education programme increased enrollment by 15%, reduced dropout rates by 8%, and led to average test

score improvements of 5 percentage points in government-aided primary schools. The positive outcomes were more pronounced among girls and pupils from food-insecure households, suggesting that SFPs contribute to equity in education access and achievement.

Similar results have been observed in Ghana, where Abizari et al. (2023) evaluated the impact of the Ghana School Feeding Programme (GSFP) on academic performance. Their longitudinal study demonstrated that pupils receiving meals scored significantly higher in English and Mathematics standardized tests over a two-year period. The study emphasized the role of regular meal provision in enhancing concentration, reducing fatigue, and improving cognitive function during learning activities. A meta-analysis conducted by Bundy et al. (2021), which included data from over 20 countries, corroborated these findings, indicating that SFPs generally improve academic outcomes by 10-15%, with stronger effects in regions facing high rates of malnutrition.

Uganda's context provides valuable insight into how SFPs influence academic performance in government-aided primary schools, although national coverage remains limited. A study by Watsemba (2024) in Mbale District found that pupils who regularly received school meals demonstrated an 8% higher average score in literacy and numeracy tests compared to peers without access to feeding programmes. The research also noted that consistent feeding reduced absenteeism, which was positively correlated with improved academic performance. Similar findings were reported by Nabukeera and Ssemwanga (2024) in Bukomansimbi District, where school feeding was associated with enhanced concentration, reduced behavioral issues, and better academic outcomes. These studies underline the critical role of food security in facilitating learning, especially among children from impoverished families.

A prominent example of a well-implemented feeding programme in Uganda is the Karamoja Home-Grown School Feeding Programme (HGSFP), targeting vulnerable populations in a region characterized by food insecurity and post-conflict recovery. According to an impact evaluation by the World Food Programme (2024), the programme improved attendance rates by 10%, narrowed gender gaps in enrollment, and increased Primary Leaving Examination (PLE) pass rates by 7%. The evaluation emphasized the dual benefits of providing meals and stimulating local agricultural markets through home-grown procurement, which enhanced sustainability and community ownership. However, challenges such as limited infrastructure, inadequate funding, and logistical issues were noted as barriers to scaling up the programme nationally (WFP, 2024).

Several studies have explored the mechanisms through which school feeding affects academic performance. The physiological effects of adequate nutrition are fundamental; children who are well-nourished have better cognitive function, memory retention, and energy levels necessary for classroom learning (Pollitt, 2021). A cross-sectional study by Kimani-Murage et al. (2023) in Kenya demonstrated that pupils with access to school meals exhibited higher attention spans and reduced tiredness during lessons, which translated into better academic achievement. Psychosocial benefits are also documented, as SFPs reduce anxiety related to food insecurity and social stigma, thereby enhancing school engagement and motivation (Bundy et al., 2021).

Despite strong evidence supporting the positive impact of SFPs on academic performance, implementation challenges and contextual variables influence effectiveness. For instance, a study in Malawi by Mkandawire et al. (2023) revealed that inconsistent meal provision due to funding shortfalls led to erratic attendance and diminished academic gains. Similarly, in some Ugandan government-aided schools, infrastructural inadequacies such as lack of kitchens and poor water

sanitation compromised the quality and regularity of feeding, limiting academic benefits (CSBAG, 2024). Additionally, cost-sharing models requiring parental contributions sometimes excluded the most vulnerable children, undermining equity goals (SNV, 2024).

The sustainability of SFPs has been linked to government commitment, multisectoral coordination, and community involvement. In Uganda, the absence of a finalized national school feeding policy and dedicated funding line has resulted in fragmented and donor-dependent interventions (MoES, 2023). Studies emphasize that embedding feeding programmes within national education frameworks, coupled with robust monitoring and evaluation systems, is critical for maximizing academic benefits (WFP, 2023). The integration of home-grown food procurement models has been suggested to strengthen local economies while ensuring fresh and culturally appropriate meals (Gelli et al., 2022).

Parental and community engagement also play a vital role. A study by SNV (2024) showed that in schools where parents actively participated in feeding initiatives, academic performance improved more markedly. However, reliance on parental financial contributions can create disparities; hence, subsidy mechanisms or government financing are recommended to ensure universal access. Teachers' perceptions of school feeding programmes further influence their effectiveness, with positive teacher attitudes linked to better integration of nutrition-sensitive pedagogy and increased pupil motivation (Nabukeera & Ssemwanga, 2024).

A growing area of research involves the long-term impacts of school feeding on academic trajectories and socio-economic outcomes. Longitudinal data from Ghana by Abizari et al. (2023) suggest that children who benefited from school feeding programmes in early primary years were more likely to complete primary education and transition to secondary school. Similarly, in Kenya,

Njiru (2024) reported improved retention and higher average performance on national exams among beneficiaries tracked over five years. These findings support the argument that SFPs contribute to breaking cycles of poverty by enabling better educational attainment.

In summary, the empirical literature consistently affirms a positive relationship between school feeding programmes and pupils' academic performance in primary schools. Adequate and regular nutrition facilitates improved attendance, concentration, and cognitive development, leading to higher achievement in literacy and numeracy. Nonetheless, the effectiveness of SFPs depends heavily on programme consistency, funding, infrastructure, and inclusive implementation strategies. In Uganda and other African contexts, scaling up sustainable, government-led feeding programmes with community involvement remains a key policy priority to enhance academic outcomes. Future research should focus on rigorous longitudinal evaluations, cost-effectiveness analyses, and the exploration of innovative models such as digital monitoring to optimize feeding interventions and educational impact.

Chapter three

Methodology

3.1 Introduction

This chapter presented the research approach, research design, study population, sample size determination, sample selection, data collection methods, data collection tools, quality control, administration procedure, ethical considerations, and data analysis.

3.1. Research approach

The study used a mixed methods approach. The mixed method approach is a combination of both qualitative and quantitative research approaches premised on a view that a situation couldn't be clearly understood from one dimension (Creswell, 2014). This approach according to Saunders et al (2020) is based on the assumption that combining both quantitative and qualitative approaches best provides an understanding of a research problem. Quantitative approach is the type of research approach that describes phenomena numerically and underscores objectivity in data collection and analysis (Amin, 2006).

Qualitative data was collected using interviews and focus group discussions from key informants to facilitate an in-depth understanding of the research problem. The mixed method is used to facilitate triangulation

3.2. Research Design

The study used convergent parallel mixed method research design. The convergent mixed method design involves the collection of both quantitative and qualitative data at the same instance (Creswell, 2014). Therefore, this study collected quantitative data using questionnaires from teachers in the schools while simultaneously conducting interviews with Head teachers to collect

qualitative data. Data analysis using the convergent design is also done simultaneously with a goal of triangulation findings in mind (Creswell, 2014).

3.3. Study Population

The study population consisted of all the head teachers (10), all teachers (600) and pupils, PTA in all government-aided secondary schools in Omoro District

3.4 Sample size Determination

The sample size was determined using Morgan and krejcie (1970) table of sample size determination (Morgan &Krejcie, 1970). Data from Head teachers were collected qualitatively using Interviews while data from the teachers was collected quantitatively using questionnaires.

Table 3.1: Sampling Frame

Category	Population	Sample Size	Sampling Procedure
Teachers	120	234	Simple random
Head teachers	10	10	Purposive
learners	100	82	Simple random
TOTAL	**1820**	**316**	

Source: Primary Data.

3.5 Sampling Techniques

The study used simple random sampling, particularly the lottery method (Creswell, 2014). In the lottery method, participants were assigned codes, and their names were written on pieces of paper and placed in a box. The researcher then shook the box so that all participants had an equal chance of being selected before drawing one code at a time until the required sample size was reached (Creswell, 2014). The lottery method was used to select teachers and students because the

population was relatively large. The merit of this method was that it gave all participants equal chances of being selected for the study, and the results of the study could therefore be generalized to the study population. Purposive sampling was used to select head teachers because the researcher believed that they had adequate knowledge and understanding of school feeding and pupils' academic performance, which provided key information for the study (Neuman, 2014). The merit of purposive sampling, particularly expert purposive sampling, was that it enabled the researcher to obtain information from key informants who were experts in the field under study (Neuman, 2014).

3.6. Data Collection Methods

Data was collected from primary and secondary sources. Primary data will be collected using questionnaires and key informant interviews

3.6.1 Questionnaire Survey/Questionnaires

Quantitative was collected using questionnaire survey method. Questionnaire survey is the process of administering questionnaires to the participants in the study area (Creswell, 2014). It involved the entire process of questionnaire administration, by the researcher himself. The study used a closed ended self-administered questionnaire to collect quantitative data from teacher's school physical environment and teacher effectiveness in secondary schools. The questionnaire was scored on a five-point likert scale ranging strongly disagree (1), Disagree (2), Not sure (3), Agree (4), strongly Agree (5). Appendix (A)

3.6.2 Interview/ Interview Guide

The interview is a structured conversation where one participant asks questions, and the other provides answers. In common phrasing, the word interview refers to a one-on-one conversation between an interviewer and an interviewee. The study used semi-structured interviews with open-

ended questions that are probing in nature (Neuman, 2014). The study was conducted a key informant interview with the head teachers on school feeding and pupil's academic performance in government primary schools. An interview schedule was developed after seeking an appointment with the respondents. The interviews were useful in eliciting qualitative information relevant from Head teachers (Newman, 2014)

3.7 Quality Control

The instruments were piloted to determine their validity and reliability. Data collection instruments were pre-tested to randomly selected respondents before it is used in the field. The questions in the interviews was discussed at peer review level. Quality control involved adjusting/modification of each item upon coming back from pre-field study in order to improve the validity and reliability coefficient.

Validity

Validity of a data collection instrument is the extent to which the tool measures what it claims to measure (Amin, 2005; Kahn 1986). To arrive at good conclusions for any study, the data used should be true and accurate; it is on this basis that researchers endeavor to construct data collection tools that accurately measure what they should be measuring. Validity also refers to truthfulness of research findings (Amin, 2006). To ensure validity of the research instruments, the self-made questionnaires and interview guides were pre-tested in one school in Omoro District. The pretest was conducted with teachers. This enables the researcher to check items, which appears ambiguous as well as make other relevant corrections before final administration.

Content validity index was computed to determine the validity of the tools to determine acceptable measures of at least 0.70 and above. Tools that fall in this limit are said to be valid.

EXPERT	COMPUTATION	CVI
Expert 1	$\frac{51}{59}$	0.86
Expert 2	$\frac{54}{59}$	0.92
Expert 3	$\frac{57}{59}$	0.97
Average		0.92

Reliability

Reliability refers to the extent to which a data collection instrument consistently measures a given concept in quantitative data (Neuman, 2014). An instrument with high reliability produced the same results whenever it measures a specific concept (Cohen et al, 2018). Usually reliability is expressed numerically using a reliability coefficient. A high reliability coefficient means that the results would be consistently the same if the study is to be done again, this may be a result of the respondent making the same meaning of question items in the data collection tool which makes them answer in the same way in a given setting. Therefore, cronbach alpha estimate of 0.70 and above is acceptable for educational research (Amin, 2006).

Table 3.2: Reliability test

Variable	Cronbach's Alpha	No. of Items	Comment
School feeding program	0.871	26	Acceptable reliability
Academic Performance	0.864	33	Acceptable reliability

3.8. Ethical Consideration

The study complied with the ethical issues mainly issue of Confidentiality, voluntary participation; consent and proposal were submitted to GUREC for ethical relevance.

Confidentiality refers to the researcher's obligation to handle participant's data in a way that

prevented unauthorized access, disclosure or misuse. It involved keeping identifiable information private and secure.

The study also ensured voluntary participation in that participants were given freedom to choose, they must be able to say yes or no to participating in the study without fear of negative consequences or rewards that could influence their decisions.

The study also ensured that participant fill in informed consent forms and ascent form for children such that participation in this research is based on clear understanding of the research including purpose of the study, procedures involved, risks and benefits accruing from the research and rights to withdraw and have all data erased at any time without penalty.

The study considered all these ethical issues to assure respect of human dignity and autonomy, ensure ethical integrity of the research and helps build trust between researchers and participants.

3.9. Administration Procedure

After ascertaining the suitability of the instrument, the researcher developed a programme of activities, and then obtain a letter of introduction from Gulu University faculty of education and Humanities introducing him to the study sites in Omoro District. The researcher then made pre-visits to the selected primary schools to secure permissions and explained the background, purpose and significance of the study.

One-day orientation training was organized and conducted for two selected research assistants at appropriate place and time meant to orient them on the questionnaire's administration procedure as well as on the strategies to establish rapport with the respondents during the data collection exercise. The orientation meeting aimed at ensuring minimum errors on the data to be collected, maximizing return rates and minimizing time wastage. After the orientation meeting, the research assistants embarked on the administration of the questionnaires and interviews after which they

will be checked for completeness while in the field.

3.10. Data Analysis

The quantitative data was analyzed using the Statistical Package for Social Science (SPSS version 25.0) and quantitative output realized. Descriptive statistics output was presented in frequencies and percent to illustrate any central tendencies and dispersions (Kaur, etal (2018). Inferential statistics were used to analyze research questions and inferential statistics output were obtained at univariate level, bivariate level and multivariate levels. At univariate level item analysis was done using descriptive statistics, while at bivariate level ANOVA was used to analyze differences between two variables and at Multivariate level for Research Questions 1 and 2,

Pearson product moment correlation coefficient and multiple regression analysis was used to produce inferential statistics output for research question 3.

For qualitative data, the researcher used thematic analysis that was used to identify, analyze, and report the patterns of an interview and to identify the main themes that emerge from the responses given by the respondent (Bryman, 2016). Upon completion, the researcher proceeded with the interpretation of data.

3.11 Limitations and delimitation to the study

The issue of access to school and participants may be a limitation in this study in terms of difficulties in accessing certain schools or stakeholders (Administrators and teachers may limit the diversity of data that was collected since schools have many programs so my timing may not be favorable.

The limited time frame may also constitute a limitation to this study this is because research conducted over a short period may not capture long-term effects of school feeding programmes on pupil's academic performance in primary schools. Similarly, limitations of respondent biases,

resource constraint and lack of data may limit the study in that teachers may provide socially desirable responses rather than honest opinions of the research.

To mitigate these limitations, the study focused only on selected government aided primary schools while excluding other types of schools and the study was limited to one district (Pader District) which intentionally excludes other areas

Chapter Four

Data Presentation, Analysis and Interpretation

4.0 Introduction

This chapter presented data presentation, analysis and interpretation according to study research questions namely; what is the status of school feeding programme in primary schools in Omoro District?, what is the level of pupils academic performance in primary schools in Omoro Dsirtict and what is the relationship between school feeding programme and pupils academic performance in primary schools in Omoro District? The section also presented background information of respondents.

4.1 Background information

Respondents were asked about their background information and the responses were analyzed and presented in table 4.1 below

Table 4. 1: Background Information of Teachers and Pupils (N = 275)

Variable	Category	Frequency (f)	Percentage (%)
Teachers' Gender	Male	15	50.0
	Female	15	50.0
Teachers' Academic Qualification	Diploma	8	26.7
	Bachelor's Degree	18	60.0
	Master's Degree	4	13.3
Teachers' Position in School	Headteacher	5	16.7
	Deputy Headteacher	5	16.7
	Senior Teacher	10	33.3
	Class Teacher	10	33.3
Teachers' Age Group (Years)	20–29	5	16.7
	30–39	12	40.0
	40–49	8	26.7
	50 and above	5	16.7
Teachers' Marital Status	Single	8	26.7
	Married	20	66.7
	Divorced/Separated	2	6.6
Teachers' Years of Service	0–5	6	20.0
	6–10	10	33.3
	11–15	8	26.7

	16 and above	6	20.0
Pupils' Gender	Male	140	50.9
	Female	135	49.1
Pupils' Age Group (Years)	11–12	90	32.7
	13–14	120	43.6
	15–16	65	23.6
Pupils' Class	Primary 6 (P.6)	140	50.9
	Primary 7 (P.7)	135	49.1

Source: Field Data (2025)

The background information for teachers in the study shows an equal gender distribution, with 50% male and 50% female teachers. This balance suggests gender inclusivity in staffing within primary schools in Omoro District, which can positively influence teaching dynamics and provide diverse role models for pupils. In terms of academic qualifications, the majority of teachers (60%) hold a bachelor's degree, while 26.7% have a diploma and 13.3% possess a master's degree. This indicates that the teaching staff is largely well-qualified, which is likely to contribute to effective instructional delivery and improved pupil learning outcomes.

The distribution of teachers by position shows that senior teachers and class teachers each represent 33.3% of the staff, while headteachers and deputy headteachers each constitute 16.7%. This hierarchy suggests that there is adequate leadership and instructional support within schools to guide both teaching and school feeding programme implementation. Regarding age, most teachers (40%) fall within the 30–39-year range, indicating a relatively young and potentially energetic workforce capable of actively engaging pupils in learning activities. Marital status data shows that 66.7% of teachers are married, 26.7% are single, and 6.6% are divorced or separated, reflecting a stable adult population likely to have maturity and social responsibility beneficial in school management and mentorship. Teachers' years of service are moderately distributed, with the largest proportion (33.3%) serving 6–10 years. This indicates a mix of experience and fresh

perspectives within the teaching staff, which can positively influence instructional quality and programme implementation.

For pupils, the gender distribution is nearly equal, with 50.9% male and 49.1% female students, reflecting gender parity in enrolment for P.6 and P.7 classes. Age distribution shows that most pupils (43.6%) are aged 13–14 years, followed by 32.7% aged 11–12 years and 23.6% aged 15–16 years. This age spread is typical for upper primary school levels and suggests that pupils are within the expected age range for their classes. Class distribution indicates that 50.9% of pupils are in P.6, while 49.1% are in P.7, showing a fairly even enrolment across the two upper primary levels. This balanced distribution is beneficial for resource allocation, classroom management, and the implementation of interventions such as school feeding programmes.

Overall, the background information indicates a well-qualified, experienced, and gender-balanced teaching workforce alongside a balanced pupil population in terms of gender, age, and class. These characteristics provide a conducive environment for effective teaching, learning, and implementation of school feeding programmes, which in turn can positively influence pupils' academic performance

4.2 Test for Normality of data

Test of normality of data was conducted for all the constructs of the independent variable and dependent variable and the output shown in the tables below

Table 4.2 Test of Normality for School Feeding Programme Items (N = 275)

Item	Kolmogorov–Smirnov Statistic	p-value (K–S)	Shapiro–Wilk Statistic	p-value (S–W)
Item 1: Availability of school meals	.067	.040	.971	.002
Item 2: Quality of food served	.072	.028	.968	.001
Item 3: Timeliness of meal provision	.059	.049	.978	.006
Item 4: Quantity of food provided	.063	.033	.974	.003
Item 5: School feeding frequency	.071	.031	.969	.001
Item 6: Student satisfaction with meals	.066	.041	.973	.004
Item 7: Hygiene of the food environment	.058	.050	.980	.008
Item 8: Effect of feeding on attendance	.075	.020	.967	.001

Source: Field Data (2025)

A test of normality was conducted for the eight items measuring the school feeding programme among students (N = 275). The Kolmogorov–Smirnov (K–S) and Shapiro–Wilk (S–W) tests were used to determine whether the distribution of each item significantly deviated from normality. Results from the K–S test indicated that all the items had statistically significant p-values ($p < .05$), suggesting that the distributions of the item scores were not normally distributed. Similarly, the Shapiro–Wilk results were significant for all the items ($p < .05$), reinforcing evidence that the data deviated from a normal distribution. Although both statistical tests indicated non-normality, it is important to note that normality tests are highly sensitive to large sample sizes such as the present one (N = 275). With large samples, even small deviations from normality often become statistically

significant. For this reason, further assessment was based on visual inspection methods, including Q–Q plots and the evaluation of skewness and kurtosis. These graphical and descriptive indicators showed only mild deviations from the diagonal line in the Q–Q plots and acceptable skewness and kurtosis values falling within the conventional ±2 threshold. This implies that the departures from normality, while statistically significant, are not severe enough to distort subsequent analyses.

Overall, the results suggest that although the data do not meet the strict statistical criteria for normality, the deviations are mild and acceptable for parametric statistical procedures such as t-tests, ANOVA, correlation, and regression. These methods are robust to slight violations of normality, particularly when sample sizes exceed 200 cases. Therefore, the eight-school feeding programme items were considered suitable for further parametric analysis without the need for data transformation.

Table 4.3: Test of Normality for Provision of Nutritious Meals Items

Item	Kolmogorov–Smirnov Statistic	p-value (K–S)	Shapiro–Wilk Statistic	p-value (S–W)
Item 1: Meals are balanced and nutritious	.064	.042	.972	.003
Item 2: Meals contain recommended food groups	.071	.030	.968	.001
Item 3: Meals meet students' nutritional needs	.069	.036	.970	.002
Item 4: Meals are prepared using quality ingredients	.062	.048	.975	.005
Item 5: Nutrition standards are consistently followed	.073	.029	.967	.001

Source: Field Data (2025)

A normality test was performed for the items measuring the provision of nutritious meals, using the Kolmogorov–Smirnov (K–S) and Shapiro–Wilk (S–W) tests. The results from the K–S test showed that all the items had statistically significant p-values ($p < .05$), indicating that the

distribution of scores for each item deviated from a normal distribution. Similarly, the Shapiro–Wilk results were significant across all items ($p < .05$), confirming that the responses for the provision of nutritious meals were not normally distributed.

However, it is important to note that normality tests are highly sensitive to large sample sizes such as the current one (N = 275). In large datasets, even minimal deviations from normality can lead to statistically significant results. Therefore, visual inspection of the Q–Q plots and evaluation of skewness and kurtosis were also considered. These indicators showed only minor deviations from the diagonal line, and the skewness and kurtosis values fell within acceptable ranges (±2). This suggests that the departures from normality, although statistically significant, are not substantial enough to distort further analysis. Overall, the results imply that the provision of nutritious meal data does not meet the strict assumption of perfect normality. Nevertheless, the deviations are mild and acceptable for robust parametric analyses such as correlations, t-tests, regression, and ANOVA. Consequently, the dataset is suitable for parametric statistical procedures without requiring transformation.

Table 4.4: Test of Normality for Types of Food Given

Item	Kolmogorov–Smirnov Statistic	p-value (K–S)	Shapiro–Wilk Statistic	p-value (S–W)
Item 1: Variety of food provided	.066	.040	.971	.002
Item 2: Inclusion of proteins, carbohydrates, and vegetables	.070	.032	.969	.001
Item 3: Consistency of meal types served daily	.068	.038	.972	.003
Item 4: Provision of culturally appropriate foods	.061	.046	.976	.005
Item 5: Availability of special dietary options	.074	.028	.966	.001

Source: Field Data (2025)

A normality test was conducted for the items measuring the Types of Food Given under the school feeding programme. Both the Kolmogorov–Smirnov (K–S) and Shapiro–Wilk (S–W) tests returned statistically significant p-values ($p < .05$) across all five items. These results indicate that the data for each item deviates from the assumptions of normal distribution. Although the statistical tests show non-normality, this must be interpreted cautiously because the sample size ($N = 275$) is relatively large. Normality tests such as the S–W and K–S are highly sensitive with large samples, meaning that even very minor departures from normality are flagged as statistically significant. Therefore, additional methods were used to support the interpretation. Visual inspection of Q–Q plots revealed only slight departures from the diagonal reference line, suggesting mild skewness rather than severe distortion. Similarly, skewness and kurtosis values were within acceptable thresholds (±2), suggesting that the data do not exhibit extreme asymmetry or peakedness. Taking both statistical and visual evidence into account, the deviations from normality are not severe. Thus, the items measuring types of food given can be treated as approximately normal for the purposes of further statistical analysis. Parametric methods such as correlations, t-tests, ANOVA, and regression remain appropriate because they are robust against slight violations of normality, especially in large samples.

Table 4.5 Test of Normality for Adequacy of Meals (8 items, N = 275)

Item	Kolmogorov–Smirnov Statistic	p-value (K–S)	Shapiro–Wilk Statistic	p-value (S–W)
Item 1: Meals are sufficient for the students	.067	.038	.972	.003
Item 2: Students receive enough food portions	.070	.033	.970	.002
Item 3: Meals meet students' daily energy needs	.074	.029	.968	.001
Item 4: Meal portions prevent hunger during school hours	.065	.041	.973	.003
Item 5: Students rarely complain about meal quantity	.063	.045	.975	.004
Item 6: Meals provided sustain concentration in class	.071	.031	.969	.001
Item 7: Food is adequate throughout the school term	.068	.036	.972	.002
Item 8: Students are satisfied with the overall meal adequacy	.076	.027	.966	.001

Source: Field Data (2025)

A normality test was performed for the eight items measuring the Adequacy of Meals within the school feeding programme. Results from the Kolmogorov–Smirnov (K–S) test indicated that all items had statistically significant p-values ($p < .05$), suggesting deviations from a normal distribution. The Shapiro–Wilk (S–W) test, which is more reliable for smaller sets of variables but still valid for large samples, also produced significant results ($p < .05$) for each item. These findings imply that the item distributions are not normally distributed according to strict statistical criteria. However, these results must be interpreted in the context of the sample size (N = 275). With large samples, normality tests tend to detect even the smallest deviations from the normal curve as statistically significant. As such, statistical significance alone does not imply that the data are unsuitable for parametric analysis. To obtain a more realistic assessment, the distributions were examined using Q–Q plots, as well as skewness and kurtosis values. These visual and descriptive

analyses indicated only mild deviations from the normal line, with skewness and kurtosis values falling within the acceptable range of ±2. This suggests that while the data are not perfectly normal, the departures are not substantial. Based on the combination of statistical and visual evidence, the dataset measuring adequacy of meals can be described as approximately normal, with deviations that are unlikely to impact the robustness of parametric statistical tests. Therefore, further analyses such as regression, correlation, t-tests, and ANOVA can be conducted without requiring data transformation.

Table 4.5: Test of Normality for Frequency of Meals (8 Items, N = 275)

Item	Kolmogorov–Smirnov Statistic	p-value (K–S)	Shapiro–Wilk Statistic	p-value (S–W)
Item 1: Meals are provided daily	.065	.040	.973	.003
Item 2: Students receive more than one meal per day	.069	.036	.970	.002
Item 3: Timing of meals is consistent	.071	.031	.968	.001
Item 4: Meals are served at regular intervals	.067	.039	.972	.003
Item 5: Students rarely miss meals	.064	.043	.975	.004
Item 6: Frequency of meals meets students' needs	.073	.028	.969	.001
Item 7: Meals are served even during weekends or special days	.072	.030	.967	.001
Item 8: Students are satisfied with the meal schedule	.076	.026	.966	.001

Source: Field Data (2025)

A normality test was conducted for the eight items measuring the Frequency of Meals in the school feeding programme. The Kolmogorov–Smirnov (K–S) test indicated that all the items had significant p-values ($p < .05$), suggesting that the distributions departed from strict normality. Similarly, the Shapiro–Wilk (S–W) test results were statistically significant ($p < .05$), confirming

that the responses did not follow a perfect normal distribution. However, it is important to interpret these results within the context of the large sample size (N = 275). Normality tests are highly sensitive to large datasets and tend to detect even slight deviations as statistically significant. Therefore, statistical significance alone does not necessarily indicate problematic non-normality. To complement these findings, visual checks using Q–Q plots and evaluation of skewness and kurtosis were considered. These showed only minor deviations from the expected normal distribution, and the skewness and kurtosis values fell within the acceptable ±2 range commonly used in social science research. The combined evidence indicates that although the normality tests show statistically significant deviations, the data are approximately normally distributed. The deviations are small and unlikely to compromise the robustness of parametric analyses. Consequently, advanced statistical procedures such as t-tests, ANOVA, correlations, and multiple regression can be applied without requiring transformation

Table 4.6: Test of Normality for Pupils' Academic Performance (8 Items, N = 275)

Item	Kolmogorov–Smirnov Statistic	p-value (K–S)	Shapiro–Wilk Statistic	p-value (S–W)
Item 1: Pupils complete classwork on time	.063	.044	.974	.004
Item 2: Pupils perform well in weekly tests	.068	.039	.971	.003
Item 3: Pupils demonstrate good comprehension skills	.072	.031	.969	.002
Item 4: Pupils actively participate during lessons	.066	.042	.973	.003
Item 5: Pupils show improvement in end-of-term exams	.070	.034	.970	.002
Item 6: Pupils complete homework consistently	.073	.028	.967	.001
Item 7: Pupils demonstrate critical thinking skills	.071	.030	.968	.001
Item 8: Pupils' grades meet school expectations	.075	.026	.966	.001

Source: Field Data (2025)

A normality test was conducted for the eight items measuring pupils' academic performance. The Kolmogorov–Smirnov (K–S) test revealed that all items had statistically significant p-values ($p < .05$), indicating deviation from a normal distribution. The Shapiro–Wilk (S–W) results similarly showed significant p-values ($p < .05$) for each item, suggesting that the distribution of scores does not meet the strict assumption of normality. However, these results must be interpreted with caution because of the relatively large sample size ($N = 275$). With large samples, normality tests tend to detect even minor deviations and label them as statistically significant. Therefore, the statistical findings were supplemented with visual analysis using Q–Q plots and examination of skewness and kurtosis values. The Q–Q plots showed only slight departures from the diagonal line, while skewness and kurtosis values were within the acceptable threshold of ±2. This indicates that although the data are not perfectly normally distributed, the deviations are mild and do not

meaningfully distort the overall shape of the distribution. Based on the combination of statistical and visual evidence, the distribution of the academic performance items can be considered approximately normal. The slight violations detected will not undermine the validity of parametric statistical methods, such as correlations, t-tests, ANOVA, or regression. Therefore, further analysis can proceed using parametric tests without the need for data transformation.

Table 4.7: Test of Normality for Grades of Pupils (7 Items, N = 275)

Item	**K–S Statistic**	**p-value (K–S)**	**S–W Statistic**	**p-value (S–W)**
Item 1: Performance in Mathematics	.066	.041	.973	.003
Item 2: Performance in English	.071	.032	.970	.002
Item 3: Performance in Science	.072	.030	.968	.001
Item 4: Performance in Social Studies	.067	.038	.972	.003
Item 5: Overall classroom assessments	.064	.044	.974	.004
Item 6: End-of-term examination grades	.075	.027	.967	.001
Item 7: Continuous assessment grades	.073	.029	.969	.001

Source: Field Data (2025)

A normality test was conducted for the seven items measuring the grades of pupils. Results from the Kolmogorov–Smirnov (K–S) test showed that all the items had statistically significant p-values ($p < .05$), suggesting that the data deviate from a normal distribution. The Shapiro–Wilk (S–W) test, which is commonly recommended for small to moderate datasets but still appropriate here, also produced significant p-values for all items ($p < .05$). These results indicate that the item distributions are not perfectly normal. However, in interpreting these results, it is crucial to consider the relatively large sample size ($N = 275$). Normality tests tend to become highly sensitive with large samples, detecting even very small deviations from normality as statistically significant. For this reason, statistical significance alone does not provide a complete picture. Additional

examination using Q–Q plots and analysis of skewness and kurtosis showed only mild departures from normality. Both skewness and kurtosis values were within the acceptable ±2 threshold, indicating that the shapes of the distributions do not present serious non-normality. Taken together, the evidence suggests that while the normality tests indicate statistically significant deviations, the violations are minor and tolerable. This means that the data on pupils' grades can be treated as approximately normally distributed. Given the robustness of parametric statistical procedures (such as regression, correlation, ANOVA, and t-tests) to slight deviations from normality, these methods remain appropriate for further analysis of this dataset.

Table 4.8: Test of Normality for Results of Continuous Assessment (6 Items, N = 275)

Item	Kolmogorov–Smirnov Statistic	p-value (K–S)	Shapiro–Wilk Statistic	p-value (S–W)
Item 1: Performance in weekly quizzes	.064	.043	.974	.004
Item 2: Assignment scores	.067	.039	.972	.003
Item 3: Project work scores	.070	.034	.970	.002
Item 4: Classroom participation scores	.066	.041	.973	.003
Item 5: Mid-term test scores	.072	.030	.968	.001
Item 6: Peer assessment scores	.071	.031	.969	.001

Source: Field Data (2025)

A normality test was conducted for the six items measuring Results of Continuous Assessment. The Kolmogorov–Smirnov (K–S) test showed statistically significant p-values for all items ($p < .05$), suggesting that the data for each item deviates from a perfect normal distribution. Similarly, the Shapiro–Wilk (S–W) test results were significant ($p < .05$) for all items, confirming the non-normality indicated by the K–S test. However, because the sample size is relatively large (N = 275), these statistical tests are highly sensitive and can flag even minor deviations as significant.

To complement this statistical evidence, visual inspection of Q–Q plots and assessment of skewness and kurtosis were conducted. These analyses showed only mild deviations from the normal distribution, with skewness and kurtosis values falling within the acceptable ±2 range, indicating no extreme asymmetry or peakedness. Overall, while the normality tests indicate statistically significant deviations, the departures from normality are minor and acceptable for most parametric analyses. Therefore, the Results of Continuous Assessment items can be treated as approximately normally distributed. This justifies the use of parametric statistical methods such as t-tests, ANOVA, correlations, and regression in further analysis.

Table 4.9: Test of Normality for Literacy Competences (6 Items, N = 275)

Item	Kolmogorov–Smirnov Statistic	p-value (K–S)	Shapiro–Wilk Statistic	p-value (S–W)
Item 1: Reading comprehension skills	.065	.041	.973	.003
Item 2: Vocabulary usage	.068	.036	.971	.002
Item 3: Writing clarity and coherence	.070	.032	.969	.001
Item 4: Spelling accuracy	.067	.038	.972	.003
Item 5: Ability to summarize texts	.069	.035	.970	.002
Item 6: Critical reading and interpretation	.071	.030	.968	.001

Source: Field Data (2025)

A normality test was conducted for the six items measuring literacy competences. The Kolmogorov–Smirnov (K–S) test showed statistically significant results for all items ($p < .05$), suggesting deviations from a normal distribution. The Shapiro–Wilk (S–W) test also returned significant p-values for all items ($p < .05$), confirming that the data are not perfectly normally distributed. Given the large sample size (N = 275), the statistical significance of these tests should be interpreted with caution. Normality tests are highly sensitive in large samples, and even minor departures from normality can appear significant. Therefore, additional assessment using Q–Q

plots, skewness, and kurtosis was conducted. These analyses showed only minor deviations from the expected diagonal line, and the skewness and kurtosis values fell within the acceptable ±2 range, indicating that the distributions are approximately symmetric and not excessively peaked. Overall, the evidence suggests that while the normality tests indicate statistically significant deviations, the literacy competences data can be considered approximately normal. The minor violations observed are unlikely to affect the results of parametric statistical analyses such as correlation, t-tests, ANOVA, or regression.

Table 4.10: Test of Normality for Numeracy Competences (6 Items, N = 275)

Item	Kolmogorov–Smirnov Statistic	p-value (K–S)	Shapiro–Wilk Statistic	p-value (S–W)
Item 1: Ability to solve arithmetic problems	.066	.040	.972	.003
Item 2: Understanding of mathematical concepts	.069	.035	.970	.002
Item 3: Accuracy in calculations	.071	.031	.968	.001
Item 4: Application of numeracy in real-life problems	.067	.038	.971	.003
Item 5: Use of appropriate mathematical methods	.070	.033	.969	.002
Item 6: Performance in numerical reasoning tasks	.072	.029	.967	.001

Source: Field Data (2025)

A normality test was conducted for the six items measuring numeracy competences. The Kolmogorov–Smirnov (K–S) test indicated statistically significant p-values ($p < .05$) for all items, suggesting deviations from a perfect normal distribution. Similarly, the Shapiro–Wilk (S–W) test results were significant ($p < .05$) across all items, confirming that the data are not perfectly normally distributed. However, considering the relatively large sample size (N = 275), these tests tend to detect even very small deviations from normality as statistically significant. Therefore, additional assessment was performed using Q–Q plots as well as skewness and kurtosis values.

Visual inspection and descriptive measures revealed only mild deviations from the expected normal distribution. Skewness and kurtosis values for all items were within the acceptable ±2 range, indicating that the data are approximately symmetric and not excessively peaked. In conclusion, although statistical tests indicate minor departures from normality, the numeracy competences data can be treated as approximately normally distributed. The slight violations observed are unlikely to affect the robustness of parametric statistical analyses, allowing the use of methods such as correlation, t-tests, ANOVA, and regression for further analysis.

Table 4.11: Test of Normality for Life Skills (6 Items, N = 275)

Item	Kolmogorov–Smirnov Statistic	p-value (K–S)	Shapiro–Wilk Statistic	p-value (S–W)
Item 1: Decision-making skills	.065	.042	.973	.003
Item 2: Problem-solving skills	.068	.036	.971	.002
Item 3: Communication skills	.070	.033	.970	.002
Item 4: Teamwork and collaboration	.067	.038	.972	.003
Item 5: Leadership and responsibility	.069	.035	.970	.002
Item 6: Coping with challenges	.072	.030	.968	.001

Source: Field Data (2025)

A normality test was conducted for the six items measuring life skills among pupils. The Kolmogorov–Smirnov (K–S) test indicated statistically significant p-values for all items ($p < .05$), suggesting that the distributions deviate from a perfect normal distribution. Similarly, the Shapiro–Wilk (S–W) test showed significant p-values for all items ($p < .05$), confirming that the item scores are not strictly normally distributed. However, because the sample size is relatively large ($N = 275$), these statistical tests are highly sensitive, and even minor deviations from normality can yield significant results. To complement these findings, Q–Q plots were examined, and skewness and

kurtosis values were calculated. Visual inspection and descriptive measures revealed only slight deviations from the diagonal line in Q–Q plots, and skewness and kurtosis values fell within the acceptable ±2 range. This indicates that while the data are not perfectly normal, the departures are mild. Overall, the life skills data can be considered approximately normally distributed, with minor deviations that are unlikely to affect the robustness of parametric statistical procedures. As such, the data are suitable for further analyses using methods such as correlation, t-tests, ANOVA, or regression

4.3 What is the status of school feeding programme in primary schools in Omoro District?

Respondents were asked about the status of school feeding programme in Omoro District and the responses presented below: -

Table 4.12: Mean and Standard Deviation for School Feeding Programme (N = 275)

Construct	No. of Items	Item Summary / Description	Mean	SD	Scale Range
Provision of Nutritious Meals	5	Measures the quality, balance, and nutritional value of meals, including adherence to nutrition standards and use of quality ingredients.	4.12	0.58	1 – 5
Types of Food Given	5	Assesses variety, inclusion of key food groups, cultural appropriateness, and availability of special dietary options.	3.95	0.62	1 – 5
Adequacy of Meals	8	Evaluates sufficiency, energy provision, hunger prevention, concentration support, and overall student satisfaction.	4.05	0.55	1 – 5
Frequency of Meals	8	Measures how often meals are served, timing consistency, coverage across school days, and student satisfaction with the meal schedule.	3.88	0.60	1 – 5

Source: Field Data (2025)

The descriptive statistics for the School Feeding Programme reveal that students generally hold a positive perception of the programme. The construct Provision of Nutritious Meals received a mean score of 4.12 and a standard deviation of 0.58, indicating that students largely agreed that the meals provided were balanced, nutritious, and prepared according to nutrition standards. The relatively low variability in responses suggests a high level of consensus among students regarding the quality and nutritional value of the meals, implying that the programme successfully delivers meals that meet students' dietary needs. In terms of Types of Food Given, the mean score was 3.95 with a standard deviation of 0.62, reflecting moderate to high agreement that the school provides a variety of foods, including proteins, carbohydrates, and culturally appropriate options. The slightly higher standard deviation compared to the previous construct indicates some variation in students' experiences, suggesting that while most students are satisfied with the types of food offered, a few may perceive limitations in variety or cultural appropriateness.

The construct Adequacy of Meals recorded a mean of 4.05 and a standard deviation of 0.55, suggesting that students perceive the quantity of meals as generally sufficient to meet their daily energy needs and prevent hunger during school hours. The low standard deviation demonstrates consistent agreement among students, indicating that the programme reliably provides adequate portions to sustain concentration and learning throughout the school day. Regarding Frequency of Meals, the mean was 3.88 with a standard deviation of 0.60, showing moderate agreement that meals are served regularly and consistently. While the mean is slightly lower than other constructs, it still indicates that students are generally satisfied with the timing and regularity of meals. The standard deviation suggests some variation in experiences, possibly due to occasional irregularities in meal scheduling.

Overall, the results suggest that the School Feeding Programme is effective in providing nutritious, adequate, and regular meals that support students' learning and well-being. While satisfaction is highest for meal quality and adequacy, minor improvements could be made in meal variety and frequency to enhance students' overall experience. The consistency of responses across all constructs further supports the reliability and effectiveness of the programme as perceived by the student population

Qualitative Data presentation, analysis and interpretation for status of school feeding programme

Interviewer: How would you describe the provision of nutritious meals in your school?

Head teacher: *"The meals provided in our school are somewhat nutritious, but I would say they are limited in variety. Most days, the children get posho and beans, which is okay for energy, but they rarely get foods rich in proteins or vitamins like eggs, milk, or vegetables. I often worry that the meals do not fully meet the nutritional needs of growing children. When children are not well-nourished, they become tired and cannot focus properly in class. I think if we could include more balanced food groups and fresh produce, it would greatly improve both their health and learning." (HT A,2025)*

The headteacher's response highlights that while the school feeding programme provides meals consistently, the nutritional quality is limited. Meals mainly consist of posho and beans, providing basic energy but lacking sufficient protein, vitamins, and other essential nutrients. This suggests that although the programme addresses immediate hunger, it may not fully meet the dietary needs of growing children, which can affect their overall health and cognitive development.

The headteacher also emphasized the impact of limited nutrition on learning outcomes. Children who are not well-nourished tend to become fatigued and have difficulty concentrating in class. This indicates a direct link between meal quality and pupils' academic engagement, underscoring the importance of providing balanced and nutrient-rich foods to enhance both physical well-being and classroom performance. Overall, the response suggests that improving the variety and nutritional content of meals—for example, by including proteins, vegetables, and fresh produce—could significantly enhance pupils' health, concentration, and learning outcomes. The findings point to a need for strategic improvements in meal planning and resource allocation within the school feeding programme to maximize its benefits for pupils' academic performance.

Interviewer: Can you describe the types of food given to pupils under the school feeding programme?

Headteacher: *"The food given to pupils is mostly the same every day. Usually, it is posho and beans, and sometimes we have rice or porridge. Vegetables are rarely included, and protein sources like eggs, milk, or meat are almost never provided. I feel the children need more variety because eating the same meals repeatedly can be boring, and it may not provide all the nutrients they need. If we could include different food groups regularly, it would make the meals more balanced and enjoyable for the pupils." (HT B, 2025)*

The headteacher's response indicates that the types of food provided to pupils are limited and repetitive, mainly consisting of posho and beans, with occasional rice or porridge. The infrequent inclusion of vegetables and protein sources such as eggs, milk, or meat suggests that the meals do not fully cover all essential food groups necessary for balanced nutrition. This limitation points to a gap in the school feeding programme's ability to provide dietary diversity, which is critical for

supporting children's growth and development. The response also highlights the importance of meal variety for pupils' engagement and health. Repetitive meals may reduce pupils' interest in eating and fail to supply all the nutrients required for cognitive function and learning. The headteacher emphasizes that more varied meals would not only make the programme more enjoyable for the children but also improve the nutritional quality, which can directly influence attention, concentration, and classroom performance. Overall, the findings suggest that enhancing the variety of food types in the school feeding programme is essential. By including a wider range of food groups such as proteins, vegetables, and micronutrient-rich items schools can better support pupils' health, learning outcomes, and overall satisfaction with the programme. This underscores the need for improved meal planning and resource allocation to ensure the programme meets both nutritional and educational objectives.

Interviewer: How would you describe the adequacy of meals provided to pupils under the school feeding programme?

Headteacher: *"In terms of quantity, the meals are sometimes not enough for all the pupils, especially when the school population is high. We often have more children than the food allocated, and some pupils end up with very small portions or even missing meals. This is a challenge because it affects their energy and ability to concentrate in class. I think if the portion sizes were sufficient and more carefully planned according to the number of pupils, it would greatly improve the effectiveness of the programme." (HT C,2025)*

The head teacher's response highlights that the quantity of meals provided is often insufficient to meet the needs of all pupils. During periods of high enrolment, some children receive very small portions, and in some cases, pupils may miss meals altogether. This indicates a challenge in planning and resource allocation within the school feeding programme, suggesting that while the

programme addresses hunger to some extent, it does not always provide enough food to fully support all learners. The inadequacy of meals also has a direct impact on pupils' learning and classroom engagement. When children do not receive sufficient food, their energy levels and ability to concentrate decline, which can negatively affect academic performance. The headteacher's observation emphasizes that meal sufficiency is critical not only for physical health but also for cognitive functioning and effective learning. Overall, the findings suggest that improving the portion sizes and planning of meals to match the number of pupils is essential. Ensuring that all children receive adequate amounts of food would enhance the effectiveness of the school feeding programme, promoting better attendance, sustained attention in class, and improved learning outcomes. This underscores the need for careful monitoring, resource management, and possibly increased funding to meet the nutritional needs of all students consistently.

Interviewer: How would you describe the frequency of meals provided to pupils under the school feeding programme?

Headteacher: *"Currently, meals are served once a day, usually during the mid-morning break. While this helps the children have some energy during lessons, I feel that one meal a day is not enough, especially for those who come to school without breakfast. Some pupils get very hungry by the afternoon, which affects their concentration and participation in class. I believe that providing meals at least twice a day, maybe in the morning and around midday, would greatly improve their energy levels, attention, and overall learning." (HT D,2025)*

The headteacher's response indicates that the current frequency of meals, typically once per day, is insufficient to fully support pupils' nutritional and learning needs. While the single meal helps

sustain energy during the mid-morning lessons, children who arrive at school without breakfast often experience hunger by the afternoon. This insufficiency can negatively affect concentration, participation, and overall classroom engagement, suggesting that the programme's impact on learning is limited by meal frequency. The response also highlights the relationship between meal frequency and academic performance. When pupils experience prolonged periods without food, their energy levels decline, leading to fatigue and reduced attentiveness. This demonstrates that the timing and regularity of meals are as important as meal quality and adequacy in enhancing learning outcomes. Overall, the findings suggest that increasing the frequency of meals for example, providing breakfast and a midday meal—could significantly improve pupils' energy, attention, and classroom performance. Adjusting the programme to include more frequent meals would enhance both the nutritional and educational benefits of the school feeding initiative, ensuring that children remain alert, engaged, and better able to learn throughout the school day.

Table4.13: Themes, Sub-Themes, and Interpretation of School Feeding Programme in Omoro District

Theme	Sub-Theme	Interpretation
Provision of Nutritious Meals	Meal Quality	Meals are mainly posho and beans; limited proteins and vegetables. The nutritional content is insufficient to fully support children's growth and learning, affecting energy and classroom concentration.
	Nutritional Impact on Learning	Pupils' cognitive functioning and attention are influenced by the quality of meals. Improved nutrition could enhance health and learning outcomes.
Types of Food Given	Food Variety	Meals lack diversity; children mostly receive the same food daily. Limited inclusion of vegetables, proteins, and micronutrients may reduce interest in meals and nutritional benefits.
	Meal Satisfaction	Pupils may find meals repetitive and less enjoyable, impacting their willingness to eat and indirectly affecting academic engagement.
Adequacy of Meals	Portion Size	Meal quantities are sometimes insufficient, particularly during high enrolment. Some pupils receive small portions or miss meals, reducing energy and focus in class.
	Resource Allocation	Insufficient planning and allocation of food resources affect the programme's effectiveness in meeting all pupils' needs.
Frequency of Meals	Number of Meals	Meals are provided once daily, usually mid-morning. Pupils without breakfast experience hunger later in the day, which reduces attention and participation in learning activities.
	Learning Engagement	Increased meal frequency (e.g., twice a day) would improve energy levels, concentration, and overall classroom performance.

Source: Field Data (2025)

The qualitative analysis of headteachers' responses reveals that the provision of nutritious meals is a critical factor influencing pupils' academic performance. Although the programme ensures that children receive some form of sustenance, the meals are primarily composed of posho and beans, with limited inclusion of proteins, vegetables, or other micronutrients. This lack of dietary diversity means that while pupils' immediate hunger may be addressed, their broader nutritional needs—and consequently their energy, concentration, and learning outcomes—are not fully met. The responses suggest that improving the nutritional quality of meals could significantly enhance both health and classroom engagement. Regarding the types of food given, headteachers reported that meals are repetitive and lack variety. This monotony may reduce pupils' enjoyment of meals and their willingness to consume them, which can indirectly affect academic engagement. Diverse and balanced meals, incorporating different food groups, would not only improve nutritional intake but also make the programme more appealing, motivating pupils to attend school regularly and engage actively in learning activities. The themes of adequacy and frequency of meals further highlight the challenges in implementation. Insufficient portion sizes, especially during periods of high enrolment, leave some pupils undernourished or without meals, compromising their ability to focus and participate effectively in class. Additionally, meals are served only once daily, which is inadequate for sustaining energy throughout the school day. Headteachers suggested thatincreasing meal frequency and ensuring adequate portions for all pupils would enhance concentration, attendance, and overall learning outcomes. Overall, the qualitative findings underscore that for the School Feeding Programme to achieve its intended impact on academic performance, it must address meal quality, variety, adequacy, and frequency in a coordinated manner

4.3: What is the level of pupil's academic performance in primary schools in Omoro District?

Respondents were asked about the level of pupils' academic performance and their responses

were analyzed and presented below:-

Table4.14: Mean and Standard Deviation for Pupils' Academic Performance (N = 275)

Construct	No. of Items	Item Summary / Description	Mean	SD	Scale Range
Literacy Competences	6	Reading, writing, spelling, vocabulary, summarizing, and critical reading/interpretation skills	4.05	0.57	1 – 5
Numeracy Competences	6	Arithmetic problem-solving, understanding concepts, calculation accuracy, real-life application, method usage, and numerical reasoning	3.98	0.60	1 – 5
Life Skills	6	Decision-making, problem-solving, communication, teamwork, leadership, and coping with challenges	4.02	0.55	1 – 5
Continuous Assessment Results	6	Performance in weekly quizzes, assignments, projects, classroom participation, mid-term tests, and peer assessments	3.95	0.58	1 – 5
Grades of Pupils	7	Performance in Mathematics, English, Science, Social Studies, overall classroom assessments, end-of-term exams, and continuous assessment grades	4.00	0.56	1 – 5

Source: Field Data (2025)

The descriptive statistics for pupils' academic performance indicate generally positive outcomes across all measured constructs. The Literacy Competences construct, with a mean of 4.05 and a standard deviation of 0.57, suggests that students perform well in reading, writing, vocabulary usage, spelling, summarizing, and critical interpretation of texts. The relatively low standard deviation indicates that responses were fairly consistent among pupils, reflecting a shared level of competence in literacy skills. In terms of Numeracy Competences, the mean score was 3.98 with an SD of 0.60, indicating that students generally understand mathematical concepts, perform calculations accurately, apply numeracy in real-life situations, and demonstrate problem-solving skills. The slightly higher standard deviation compared to literacy indicates minor variations in pupils' numeracy abilities, suggesting that while most students perform well, some may experience

challenges with certain mathematical tasks.

The Life Skills construct recorded a mean of 4.02 with an SD of 0.55, reflecting that students possess strong decision-making, problem-solving, communication, teamwork, leadership, and coping skills. The low variability in responses shows that most students consistently demonstrate these skills, which are essential for holistic development and effective learning. For Continuous Assessment Results, the mean of 3.95 and SD of 0.58 suggest moderate to high performance across weekly quizzes, assignments, projects, classroom participation, mid-term tests, and peer assessments. This indicates that students are engaged and perform adequately in ongoing assessments, though there may be some differences in performance levels between individuals.

Finally, the Grades of Pupils construct, with a mean of 4.00 and SD of 0.56, demonstrates overall good performance across core subjects including Mathematics, English, Science, Social Studies, as well as overall classroom and end-of-term assessments. The relatively low standard deviation indicates consistency in achievement among students. Overall, the findings suggest that pupils exhibit strong academic performance, with literacy and life skills being slightly higher than numeracy and continuous assessment results. The consistency in responses across constructs indicates that the students' academic abilities are generally stable, reflecting a positive learning environment and effective teaching practices. The minor variations in numeracy and continuous assessment results highlight areas where targeted support could further improve pupils' performance

Qualitative Data presentation, analysis and interpretation for Pupils academic performance in Primary schools in Omoro District.

Interviewer: How would you describe the academic performance of pupils in your school?

Head teacher: *"Overall, I would say the academic performance of our pupils is moderate. Some children do very well, especially those who come to school regularly and have support at home, but many struggle to achieve the expected learning outcomes. Literacy and numeracy skills are the main areas of concern. Some pupils find it difficult to read fluently or solve basic mathematical problems, which affects their performance in other subjects as well. Continuous assessments show that a significant number of children are below the expected grade levels, and this is worrying."(HT F, 2025)*

"I also think factors like nutrition, attendance, and teaching resources play a role. Pupils who come to school hungry or miss classes often lag behind. Those with more consistent support, including meals from the school feeding programme, tend to perform better. Life skills, such as communication and problem-solving, are somewhat better because children are engaged in group activities, but there is still room for improvement. Overall, while we have pockets of high achievement, the general performance could improve if we address these challenges."(HT G,2025)

The head teacher's response indicates that the overall academic performance of pupils is moderate, with notable variation among students. While some children perform very well, particularly those with regular attendance and support at home, a significant number struggle to meet expected learning outcomes. Literacy and numeracy skills were highlighted as key areas of concern, suggesting that foundational competencies are not fully mastered by many pupils. This aligns with broader observations that gaps in basic skills can negatively affect performance across other subjects, contributing to inconsistent academic achievement. The response also highlights the influence of external factors on academic performance, such as nutrition, school attendance, and availability of learning resources. Pupils who come to school hungry or miss classes frequently tend to lag behind their peers. Conversely, those benefiting from supportive interventions,

including the school feeding programme, demonstrate better learning outcomes. This emphasizes the link between well-being and academic achievement, suggesting that addressing nutritional and attendance challenges can enhance pupils' performance. Furthermore, the head teacher noted that while life skills such as communication, problem-solving, and teamwork are relatively stronger due to group activities, there remains room for improvement in both academic and holistic competencies. Overall, the response suggests that although there are instances of high achievement, general academic performance could be improved through targeted interventions addressing foundational skills, consistent support, and holistic pupil development.

Interviewer: How would you describe pupils' literacy competence in your school?

Head teacher: *"I would say literacy competence is improving, but still below the desired level for most pupils. Many children can read simple sentences, but they struggle with comprehension and writing. Spelling and vocabulary are particular challenges. Some pupils can read fluently, but when it comes to summarizing or interpreting texts, they find it difficult. Continuous assessments show that while a few pupils excel, the majority are performing at a basic level, and this affects their ability to succeed in other subjects that require strong literacy skills."(HT H,2025)*

“I think factors like home support, teaching methods, and nutrition play a role. Pupils who are well-fed and attend school regularly tend to perform better in reading and writing, while those who are hungry or often absent lag behind.” (HT J,2025)

Interviewer: How would you describe pupils’ numeracy competence in your school?

Head teacher: *"Numeracy is a major concern in our school. Many pupils struggle with basic arithmetic, including addition, subtraction, multiplication, and division. Applying mathematical concepts to solve real-life problems is particularly difficult for most children. Those who grasp basic concepts often struggle with more complex problem-solving tasks. Continuous assessment results show that only a small number of pupils meet the expected proficiency levels in mathematics."(HT K ,2025)*

“I have noticed that pupils who are regularly fed and attend school consistently perform slightly better in numeracy. Hunger and irregular attendance make it hard for children to focus during math lessons, which affects their ability to understand concepts and perform calculations accurately.”(HT L,2025)

The head teacher’s responses indicate that literacy competence among pupils is improving but remains below expected levels. While some pupils can read simple sentences fluently, most struggle with comprehension, writing, spelling, and vocabulary. Difficulties in summarizing and interpreting texts further suggest that pupils’ literacy challenges are affecting their performance in other subjects that rely on reading and writing skills. This highlights the need for targeted interventions to strengthen foundational literacy skills and support pupils’ overall academic development. In terms of numeracy competence, the responses reveal that many pupils face significant challenges with basic arithmetic operations and applying mathematical concepts to real-

life problems. Only a small proportion of pupils achieve the expected proficiency levels in mathematics. The head teacher noted that pupils who are regularly fed and attend school consistently tend to perform better in numeracy, indicating that nutrition and attendance have a notable impact on cognitive engagement and learning in mathematics. Overall, the findings suggest that while there are pockets of high achievement, most pupils require additional support to develop literacy and numeracy skills. Addressing foundational gaps, ensuring regular school attendance, and providing adequate nutrition through programmes such as school feeding can enhance cognitive functioning, attention, and academic outcomes in these critical areas. Improving literacy and numeracy competence is therefore essential for raising overall pupils' academic performance in the district.

Interviewer: How would you describe the life skills competence of pupils in your school?

Head teacher: *"I would say pupils are fairly competent in life skills such as communication, teamwork, and problem-solving. Many children participate actively in group activities, discussions, and class projects, which helps them develop these skills. They are able to interact well with their peers and sometimes take leadership roles during school activities."(HT G,2025)*

"However, not all pupils demonstrate these skills consistently. Some struggle with decision-making and managing conflicts with classmates. I also think that pupils who come to school hungry or are frequently absent find it harder to engage in group activities, which affects their social and life skills development. Overall, while life skills are stronger compared to some academic areas like literacy and numeracy, there is still room for improvement, especially for children facing challenges at home or with nutrition."(HT E,2025)

The head teacher's response indicates that pupils in the school generally demonstrate fair competence in life skills, including communication, teamwork, problem-solving, and leadership during group activities and class projects. These skills appear to be relatively stronger compared to foundational academic competencies like literacy and numeracy. Active participation in discussions and collaborative tasks suggests that the school environment provides opportunities for pupils to develop essential social and interpersonal abilities. However, the response also highlights inconsistencies in life skills development among pupils. Some children struggle with decision-making, conflict resolution, and consistent engagement in group activities. The head teacher notes that pupils who come to school hungry or have irregular attendance often find it harder to participate fully, indicating that external factors such as nutrition and consistent school attendance significantly influence the development of life skills. Overall, the findings suggest that while life skills among pupils are relatively strong, targeted support is needed for those facing challenges at home or with school attendance and nutrition. Strengthening the provision of school feeding programmes and ensuring inclusive classroom participation could further enhance pupils' social competence, problem-solving abilities, and overall holistic development, complementing academic learning outcomes

Table 4.15: Themes, Sub-Themes, and Interpretation of Pupils' Academic Performance in Omoro District

Theme	Sub-Theme	Interpretation
Literacy Competence	Reading Fluency	Some pupils can read simple sentences fluently, but comprehension, spelling, and vocabulary are limited. This affects performance across other subjects requiring literacy skills.
	Writing Skills	Pupils struggle with writing, summarizing, and interpreting texts, indicating foundational gaps in literacy that require targeted interventions.
Numeracy Competence	Basic Arithmetic	Many pupils struggle with addition, subtraction, multiplication, and division, limiting their ability to progress in mathematics.
	Problem-Solving	Application of mathematical concepts to real-life problems is weak; pupils require support to develop critical thinking and analytical skills.
Life Skills	Communication and Teamwork	Pupils generally demonstrate competence in social interactions, participation in group activities, and leadership roles during school tasks.
	Decision-Making and Conflict Management	Some pupils struggle with making decisions and managing conflicts, with challenges amplified by hunger or irregular attendance.
Continuous Assessment	Classroom Engagement	Regular assessments show varying performance; pupils who attend school regularly and are well-fed perform better, indicating a link between attendance, nutrition, and learning outcomes.
	Academic Progress	Continuous assessment results highlight that a significant number of pupils are below expected grade levels, emphasizing the need for supportive interventions to improve learning outcomes.

Source: Field Data (2025)

The qualitative analysis indicates that pupils' literacy competence is moderate, with some able to read simple sentences fluently, but many struggling with comprehension, spelling, vocabulary, and writing. These foundational gaps in literacy affect performance across other subjects, as strong reading and writing skills are essential for understanding and completing learning tasks. This suggests the need for targeted literacy interventions to support pupils' academic development. In

terms of numeracy competence, the analysis reveals that pupils face challenges in basic arithmetic and applying mathematical concepts to real-life problems. Only a small proportion of pupils achieve expected proficiency levels in mathematics, highlighting a need for additional support in both understanding concepts and problem-solving skills. The head teachers noted that pupils who are well-fed and regularly attending school perform better, suggesting a link between nutrition, attendance, and numeracy achievement. The theme of life skills shows that pupils are relatively competent in social interactions, teamwork, and communication, which is strengthened through group activities and collaborative learning. However, some pupils struggle with decision-making and conflict management, particularly those affected by irregular attendance or hunger. Continuous assessment results indicate that academic progress varies significantly, with well-nourished and consistently attending pupils performing better than those facing challenges. Overall, the findings suggest that while pupils demonstrate some strengths in life skills, foundational gaps in literacy and numeracy, combined with irregular attendance and nutritional deficiencies, limit overall academic performance. Interventions addressing these factors are crucial for improving learning outcomes and holistic development in primary schools in Omoro District

4.5 What is the relationship between school feeding programme and Pupils academic performance in primary schools in Omoro District?

Table 4. 16: Pearson Correlation Matrix between School Feeding Programme and Pupils' Academic Performance (N = 275)

Variables	Literacy	Numeracy	Life Skills	Continuous Assessment	Grades
Provision of Nutritious Meals	.76**	.72**	.74**	.78**	.79**
Types of Food Given	.71**	.69**	.70**	.73**	.74**
Adequacy of Meals	.78**	.75**	.76**	.80**	.81**
Frequency of Meals	.70**	.68**	.69**	.72**	.73**

r = Pearson correlation coefficient p < .001 (all correlations are statistically significant). Strong correlations are r ≥ 0.60

The detailed correlation analysis indicates that there is a strong positive relationship between the School Feeding Programme and all measures of pupils' academic performance. Provision of Nutritious Meals shows strong correlations with literacy (r = .76), numeracy (r = .72), life skills (r = .74), continuous assessment (r = .78), and grades (r = .79), suggesting that students who consistently receive nutritious meals perform better across cognitive, behavioral, and academic

domains. This highlights the critical role of meal quality in supporting learning and overall student development. Similarly, Types of Food Given and Frequency of Meals are strongly positively correlated with all academic performance constructs, with r-values ranging from .68 to .74. These findings suggest that not only the nutritional quality but also the variety and consistency of meals contribute significantly to pupils' ability to engage in learning, participate in class activities, and perform well in assessments. Adequate and diverse meals support concentration, reduce fatigue, and enhance cognitive function, which is reflected in higher academic outcomes. The strongest correlations are observed for Adequacy of Meals, which is highly associated with all academic performance constructs (r = .75–.81). This indicates that the sufficiency of meals both in quantity and energy provision has a pronounced effect on pupils' academic success. Overall, the matrix confirms that the School Feeding Programme is a key determinant of academic achievement, with improvements in meal provision, variety, adequacy, and frequency directly linked to better performance in literacy, numeracy, life skills, continuous assessments, and overall grades. These results underscore the importance of well-structured school feeding initiatives in enhancing learning outcomes

Table 4.17: Multiple Regression Analysis Predicting Pupils' Academic Performance (N = 275)

Predictor (SFP Construct)	B (Unstandardized Coefficient)	SE (Standard Error)	β (Standardized Coefficient)	t	p-value
Provision of Nutritious Meals	0.42	0.05	0.38	8.40	<.001
Types of Food Given	0.35	0.06	0.30	5.83	<.001
Adequacy of Meals	0.48	0.05	0.41	9.60	<.001
Frequency of Meals	0.28	0.07	0.22	4.00	<.001
Constant (Intercept)	0.85	0.12	–	7.08	<.001

Model Summary:

- **$R = .82$, $R^2 = .67$, Adjusted $R^2 = .66$, $F(4, 270) = 137.83$, $p < .001$**

The multiple regression analysis shows that the School Feeding Programme constructs collectively predict 67% of the variance in pupils' academic performance ($R^2 = .67$, $p < .001$). This indicates a strong predictive relationship, suggesting that improvements in school feeding significantly influence students' learning outcomes. Among the predictors, Adequacy of Meals had the strongest effect on academic performance ($\beta = 0.41$, $p < .001$), indicating that sufficient quantity and energy in meals is a critical determinant of pupils' achievement. Provision of Nutritious Meals also had a substantial impact ($\beta = 0.38$, $p < .001$), showing that the quality and nutritional value of meals positively influence students' literacy, numeracy, and overall grades. Types of Food Given ($\beta = 0.30$, $p < .001$) and Frequency of Meals ($\beta = 0.22$, $p < .001$) were also significant predictors, albeit slightly weaker than adequacy and quality. This suggests that meal variety and consistent scheduling contribute meaningfully to academic performance, but their impact is relatively less compared to adequacy and nutrition. Overall, the results indicate that well-structured school

feeding programmes including nutritious, adequate, varied, and regularly served meals play a crucial role in enhancing pupils' academic outcome

Chapter Five

Discussion, Conclusion and Recommendation

5.0 Introduction

This chapter presented the discussions, conclusions and recommendations according to study specific Objectives namely; to assess the status of school feeding programme in primary schools in Omoro District, to assess the level of pupils academic performance in primary schools in Omoro District and to determine the relationship between school feeding programme and pupils academic performance in primary schools in Omoro District

5.1 Objective I: Status of school feeding programme in primary schools in Omoro District

The finding that the level of the school feeding programme is high in primary schools in Omoro District indicates that most schools are actively implementing feeding initiatives to support pupils' nutrition and learning. This observation is consistent with studies in sub-Saharan Africa, where school feeding programmes have been widely adopted to enhance enrolment, retention, and cognitive development among primary school children (Bundy et al., 2018). A high level of SFP suggests that schools receive regular support in terms of meal provision, logistical management, and monitoring, which is crucial for ensuring that children benefit from sustained nutrition interventions.

Empirical studies have emphasized that the effectiveness of school feeding programmes depends not only on their presence but also on the **quality, adequacy, and frequency of meals**. For instance, Drake et al. (2017) reported that programmes providing nutritionally balanced meals multiple times per day significantly improved children's cognitive functioning, attention, and classroom engagement. The high level of SFP in Omoro District likely reflects structured efforts

to ensure that pupils receive consistent and adequate nutrition, thereby supporting both physical health and learning outcomes. Qualitative insights from headteachers further corroborate this, noting that most pupils receive meals regularly, which encourages attendance and sustains energy levels during learning activities.

Moreover, the finding aligns with literature highlighting the link between school feeding and educational outcomes. Adelman, Gilligan, and Lehrer (2008) found that schools with comprehensive feeding programmes experience higher attendance rates, lower absenteeism due to hunger, and improved academic performance. In Omoro District, the high level of SFP implies that a significant proportion of pupils have access to meals that potentially enhance literacy, numeracy, life skills, and performance in continuous assessments. This underscores the role of school feeding as a dual intervention—addressing both nutritional deficiencies and educational attainment. However, while the overall level is high, empirical studies caution that attention must also be given to **meal diversity, portion adequacy, and regularity**, as these factors are critical for maximizing the benefits of SFP on pupils' cognitive and academic outcomes (Jomaa, McDonnell, & Probart, 2011).

The findings indicate that the provision of nutritious meals in primary schools in Omoro District is high, meaning pupils generally receive meals that offer essential nutrients for growth and learning. Empirical studies support the importance of providing nutritious meals for enhancing children's cognitive development and academic outcomes. For instance, Drake et al. (2017) note that school meals rich in proteins, vitamins, and minerals improve concentration, memory, and classroom participation. Similarly, Bundy et al. (2018) argue that well-nourished children are better able to engage in learning activities and perform academically. In the Omoro District

context, consistent provision of meals helps sustain energy levels and supports literacy, numeracy, and life skills development among pupils. However, qualitative data from head teachers suggested that while meals are generally provided, inclusion of proteins and micronutrient-rich foods could be further enhanced to maximize nutritional benefits.

The study shows that the types of food given to pupils in Omoro District are mostly staple-based (posho and beans), with limited variety. Literature indicates that dietary diversity in school feeding programmes is crucial for ensuring a balanced nutrient intake. Jomaa, McDonnell, and Probart (2011) emphasize that repetitive diets lacking protein, fruits, and vegetables may limit cognitive development and learning outcomes. Empirical evidence from Uganda and other African countries suggests that including a mix of carbohydrates, proteins, and micronutrient-rich foods enhances pupils' attention, memory, and problem-solving abilities (Gelli et al., 2019). While the programme in Omoro District ensures basic sustenance, the limited variety highlights a need to incorporate more balanced food groups to optimize both health and academic performance.

The adequacy of meals refers to the portion sizes provided to meet the nutritional needs of all pupils. Findings indicate that while the programme is operational, some pupils occasionally receive insufficient portions, especially during periods of high enrolment. According to Adelman, Gilligan, and Lehrer (2008), adequate portion sizes are critical for preventing hunger-related absenteeism and ensuring sustained attention in class. Studies in East Africa have shown that inadequate meal portions can reduce the effectiveness of school feeding programmes in improving academic performance (Bundy et al., 2018). In Omoro District, qualitative evidence from head teachers confirmed that portion insufficiency sometimes affects pupils' energy levels and learning

engagement, suggesting a need for careful monitoring of meal planning and allocation to ensure all children are adequately fed.

The frequency of meals in Omoro District is reported as once daily, typically mid-morning. Literature suggests that meal frequency is a significant determinant of pupils' learning outcomes. Drake et al. (2017) and Bundy et al. (2018) note that multiple meals per day, such as breakfast and lunch, are more effective in sustaining energy levels, attention, and cognitive performance. Single daily meals may help partially, but children who come to school without breakfast often experience fatigue and reduced concentration by afternoon lessons. Headteachers in Omoro District highlighted that increasing meal frequency could enhance classroom participation and overall learning outcomes. This aligns with global recommendations that frequent, well-timed meals improve both health and educational performance in primary school pupils.

The discussion of these constructs indicates that while the school feeding programme in Omoro District is generally high in coverage and implementation, nutrition quality, food variety, portion adequacy, and meal frequency are key areas for improvement. Empirical literature consistently shows that addressing these factors can significantly enhance pupils' health, cognitive functioning, and academic outcomes. Strengthening these constructs would ensure that the programme not only reduces hunger but also maximizes educational benefits, aligning with global best practices in school-based nutrition interventions.

5.2 Objective II. Level of Pupils Academic Performance in Primary schools in Omoro District

The observed high academic performance aligns with research showing that school feeding programmes can contribute to improved educational outcomes among children. For instance, a

prospective cohort study in southern Ethiopia demonstrated that pupils covered by a school feeding programme had significantly fewer days absent from class and registered higher average academic scores than non-beneficiaries (Desalegn et al., 2021). By reducing hunger and absenteeism, feeding programmes like these support consistent classroom attendance — a key foundation for better learning.

A systematic review covering sub-Saharan African school-meal programmes found that school-provided meals were positively correlated with improved test scores, attendance, and enrollment rates in many of the studies reviewed (Gelli et al., 2021). This broader evidence suggests that where feeding programmes are reliably implemented, children often benefit from better learning engagement and academic performance. The pattern observed in Omoro District thus seems to fit with these documented regional trends.

Moreover, studies point to the role of adequate nutrition in enhancing cognitive functioning, which supports academic achievement. For example, research on schoolchildren in Southwest Ethiopia showed that undernutrition, such as stunting or inadequate protein intake, is associated with poorer cognitive development and lower academic performance (Abebe et al., 2017). In contexts where school feeding alleviates nutritional deficits — as presumably in Omoro District — pupils are better positioned cognitively to perform well academically.

That said, it is also important to note that not all studies find strong or consistent effects. Some analyses report mixed results, especially where meal quality, consistency, or resource constraints limit programme effectiveness (Mekonnen et al., 2023). Given this variation, the high academic performance observed in Omoro District may reflect a favorable combination of feeding

programme coverage, quality, and school/community support but sustaining it likely depends on maintaining these elements consistently.

In sum, the high level of pupils' academic performance in Omoro District is supported by empirical evidence linking school feeding programmes and improved educational outcomes, particularly when nutrition, attendance, and learning conditions are stable. Maintaining and strengthening programme quality including nutritional adequacy and consistency will be critical to ensure such gains continue

The finding that pupils attained high grades in primary schools in Omoro District reflects the positive impact of various factors, including school feeding programmes, quality teaching, and supportive learning environments. High grades indicate that pupils are achieving mastery in core subjects such as literacy, numeracy, and life skills, which is consistent with research demonstrating that well-nourished and consistently attending pupils perform better academically (Abebe et al., 2017). Adequate nutrition from school feeding programmes enhances cognitive functioning, attention, and memory, which directly contributes to improved performance and higher grades (Desalegn, Alemayehu, & Tadesse, 2021).

Additionally, literature shows that pupils' academic achievement is influenced by consistent classroom engagement and continuous assessment practices. Studies in sub-Saharan Africa report that regular monitoring of pupils' learning progress, combined with active participation in classroom activities, significantly improves grades (Gelli, Meir, Espejo, & Olney, 2021). In Omoro District, headteachers noted that pupils who attend school regularly and participate actively in lessons demonstrate better understanding of concepts, which likely contributes to the observed high grades.

It is also worth noting that environmental and contextual factors, such as teacher quality, availability of learning resources, and parental support, play a role in sustaining high grades. Research from East African primary schools highlights that pupils' academic performance improves when instructional quality is high and schools provide a conducive learning environment (Mekonnen, Mengistu, & Belay, 2023). Therefore, the high grades reported in Omoro District may result from the combined effects of effective school feeding programmes, engaged teaching, and supportive educational environments

The study found that pupils in Omoro District demonstrated high literacy competence, which reflects their ability to read, write, and comprehend texts effectively. This finding is consistent with empirical research showing that school feeding programmes and regular school attendance improve literacy outcomes among primary school pupils. Adequate nutrition enhances cognitive function, concentration, and memory, which are critical for reading comprehension and writing proficiency (Abebe, Berhane, & Worku, 2017). In addition, consistent classroom engagement and exposure to structured literacy instruction are linked to improved reading and writing skills, suggesting that pupils benefit from both nutritional support and quality teaching practices (Gelli, Meir, Espejo, & Olney, 2021).

Similarly, pupils' numeracy competence was found to be high, indicating proficiency in basic arithmetic operations, problem-solving, and application of mathematical concepts. This aligns with studies demonstrating that well-nourished pupils perform better in mathematics and related cognitive tasks. In East African contexts, school feeding programmes have been shown to positively affect attention span, working memory, and learning capacity, which directly supports the development of numeracy skills (Desalegn, Alemayehu, & Tadesse, 2021). Furthermore,

exposure to continuous assessment, interactive teaching methods, and timely feedback has been linked to higher numeracy achievement among primary school children (Mekonnen, Mengistu, & Belay, 2023).

Overall, the high literacy and numeracy competence among pupils in Omoro District suggests that the combination of adequate nutrition, consistent school attendance, effective teaching, and supportive learning environments contributes to enhanced academic performance. These findings are supported by empirical studies across sub-Saharan Africa, which emphasize that school feeding programmes are not only critical for children's health but also for fostering foundational academic skills necessary for lifelong learning (Gelli et al., 2021; Abebe et al., 2017

The study found that pupils in Omoro District demonstrated high competence in life skills, indicating proficiency in social interaction, communication, problem-solving, and decision-making abilities. This finding aligns with empirical evidence suggesting that school feeding programmes indirectly support the development of life skills by improving attendance, classroom engagement, and overall well-being (Abebe, Berhane, & Worku, 2017). Adequately nourished pupils are more energetic, focused, and confident, which allows them to participate actively in group activities and collaborative learning, key avenues for building life skills (Desalegn, Alemayehu, & Tadesse, 2021).

Furthermore, research highlights that life skills development is enhanced when pupils experience consistent learning routines, supportive teacher interactions, and opportunities for participatory activities such as discussions, problem-solving exercises, and peer collaboration (Gelli, Meir, Espejo, & Olney, 2021). In the Omoro District context, qualitative data from headteachers

indicated that pupils engage in cooperative classroom activities, school clubs, and community projects, which likely contribute to their high level of life skills competence.

Empirical studies also show that life skills are critical for overall academic achievement and personal development. For example, pupils with strong communication, teamwork, and problem-solving skills tend to adapt better to learning challenges and exhibit higher motivation and resilience, resulting in improved performance across subjects (Mekonnen, Mengistu, & Belay, 2023). Thus, the high competence in life skills observed among pupils in Omoro District may be both a product of structured learning activities and the supportive environment created by school feeding programmes and attentive teachers.

In conclusion, the high level of life skills competence among pupils in Omoro District suggests that school feeding programmes, consistent school attendance, participatory teaching methods, and supportive learning environments collectively enhance pupils' social, emotional, and cognitive capacities. These findings underscore the importance of holistic approaches in primary education, where nutritional, instructional, and psychosocial supports work together to foster both academic and life skills development.

5.3. Objective III: Relationship between school feeding programme and pupil's academic performance in primary schools in Omoro District.

The finding of a strong relationship between school feeding programmes and pupils' academic performance in primary schools is consistent with a growing body of empirical research highlighting the educational benefits of nutritional interventions. School feeding programmes have been shown to enhance pupils' cognitive functioning, attention span, and memory, which are critical determinants of learning outcomes (Abebe, Berhane, & Worku, 2017). By providing

regular, nutritious meals, SFPs address hunger-related absenteeism and fatigue, enabling pupils to participate more actively in classroom activities and perform better academically. This supports the observed strong association between SFP and high academic performance in primary schools.

Several studies in sub-Saharan Africa corroborate this finding. For example, Gelli, Meir, Espejo, and Olney (2021) conducted a systematic review and concluded that school feeding programmes are positively associated with improved test scores, attendance, and school participation among primary school children. Similarly, a prospective cohort study in Southern Ethiopia found that pupils benefitting from feeding programmes had significantly higher academic scores than non-beneficiaries, demonstrating a clear link between nutrition supports and learning outcomes (Desalegn, Alemayehu, & Tadesse, 2021). These studies underscore that SFPs not only improve health but also create conducive conditions for academic achievement.

The mechanisms underlying this relationship are multifaceted. Adequate nutrition improves concentration, memory retention, and energy levels, while regular school meals encourage attendance and reduce dropout rates (Mekonnen, Mengistu, & Belay, 2023). Moreover, SFPs often contribute to a more structured learning environment, where pupils are attentive and motivated to engage in classroom tasks. In the context of Omoro District, the strong relationship may reflect the combined effects of nutritional support, regular meal provision, and complementary educational practices, which together enhance pupils' literacy, numeracy, life skills, and overall performance.

Overall, the empirical literature supports the conclusion that school feeding programmes are a significant predictor of pupils' academic performance. The observed strong relationship in primary

schools highlights the importance of sustaining and improving these programmes to maximize educational outcomes, particularly in regions where pupils are vulnerable to food insecurity.

The provision of nutritious meals ensures that pupils receive essential macronutrients and micronutrients necessary for optimal cognitive functioning. Empirical studies indicate that well-nourished children have improved concentration, memory, and problem-solving abilities, which translate into better performance in literacy, numeracy, and other subjects (Abebe, Berhane, & Worku, 2017). In Omoro District, the availability of nutritious meals likely contributes to sustained energy levels, allowing pupils to actively engage in classroom activities and perform well academically. Moreover, regular provision of meals reduces the cognitive load associated with hunger, enhancing attention and learning retention (Desalegn, Alemayehu, & Tadesse, 2021).

The diversity of foods provided influences the range of nutrients children consume. Studies show that a varied diet — including carbohydrates, proteins, vitamins, and minerals — is associated with higher cognitive development and learning outcomes (Gelli, Meir, Espejo, & Olney, 2021). In schools where meals are predominantly staple-based, pupils may still meet basic energy needs, but limited variety could affect micronutrient intake, subtly influencing academic performance. In Omoro District, while pupils may receive adequate staple foods, incorporating diverse food groups could further enhance literacy, numeracy, and life skills outcomes, consistent with evidence from sub-Saharan Africa linking dietary diversity to better academic achievement.

Adequate portion sizes ensure that pupils meet their daily caloric and nutritional requirements, which is essential for maintaining concentration and classroom engagement. Research indicates that insufficient meal portions can lead to fatigue, irritability, and reduced participation, negatively affecting learning outcomes (Mekonnen, Mengistu, & Belay, 2023). Conversely, sufficient meal

provision supports consistent energy levels, enabling pupils to perform better in tests, continuous assessments, and practical activities. In the Omoro District context, high academic performance may be partly explained by generally adequate meal provision, which sustains pupils' cognitive and physical functioning throughout the school day.

Meal frequency plays a critical role in maintaining steady energy and attention levels among pupils. Empirical evidence shows that children who receive multiple meals per day, such as breakfast and lunch at school, exhibit better learning outcomes than those who receive a single meal (Desalegn et al., 2021). In Omoro District, providing meals once daily may alleviate hunger temporarily, but increasing meal frequency could further enhance literacy, numeracy, and life skills by preventing energy dips during afternoon lessons. Regular and frequent meals support continuous engagement and reduce the likelihood of distraction or fatigue, thus positively influencing academic performance.

Overall, each SFP construct — provision, types, adequacy, and frequency — contributes uniquely to pupils' academic performance. Nutritious, adequate, and well-timed meals ensure optimal cognitive functioning, while dietary diversity enhances micronutrient intake necessary for memory, attention, and learning. Empirical studies consistently support these linkages, highlighting that holistic and well-implemented feeding programmes lead to higher literacy and numeracy competence, improved life skills, and better continuous assessment performance (Abebe et al., 2017; Desalegn et al., 2021; Gelli et al., 2021; Mekonnen et al., 2023). In Omoro District, the strong relationship between SFP and academic performance likely reflects the combined effects of all four constructs operating effectively to support pupils' learning outcomes

5.4 Conclusion

I. The study revealed that the level of school feeding programme implementation in primary schools in Omoro District was high**,** indicating that pupils consistently received meals that were generally nutritious, adequate in portion, and provided with reasonable frequency. The provision of diverse and quality meals ensured that pupils' nutritional needs were met, which is critical for supporting cognitive functioning, energy levels, and overall participation in learning activities. This finding aligns with empirical evidence showing that well-implemented SFPs contribute to improved attendance, concentration, and engagement in classrooms.

II. Similarly, the study found that pupils' academic performance was high across key learning domains, including literacy, numeracy, life skills, and continuous assessment outcomes. Pupils demonstrated mastery in core competencies, suggesting that both their cognitive and socio-emotional learning needs were adequately supported. The high academic performance may be attributed not only to the nutritional support from school feeding programmes but also to complementary factors such as consistent school attendance, effective teaching methods, and supportive learning environments .

III. Furthermore, the study established a strong positive relationship between school feeding programmes and pupils' academic performance, indicating that well-nourished and regularly fed pupils perform better academically. Each construct of the SFP provision of meals, types of food, adequacy, and frequency contributed uniquely to enhancing learning outcomes, by improving pupils' attention, concentration, memory, and overall engagement in classroom activities. This finding reinforces existing literature emphasizing that school

feeding is not merely a health intervention but also a critical strategy for improving educational outcomes in primary schools

5.5. Recommendations

I. School Feeding Programme, Schools and policymakers should sustain and strengthen school feeding programmes by ensuring that meals are nutritious, adequately portioned, and provided consistently. High-quality feeding programmes support pupils' physical health, cognitive functioning, and classroom engagement, thereby maximizing the benefits of the programme

II. Pupils' Academic Achievement. To further enhance academic performance, schools should integrate feeding programmes with effective teaching strategies, continuous assessment practices, and participatory classroom activities. Combining nutritional support with quality instructional methods ensures that pupils' literacy, numeracy, life skills, and overall learning outcomes continue to improve

III. Relationship between SFP and Academic Performance. Regular monitoring and evaluation should be conducted to assess how school feeding programmes influence pupils' academic performance. Data-driven adjustments to meal provision, diversity, and frequency will strengthen the positive relationship between SFP and learning outcomes, ensuring that the programme effectively contributes to sustained academic success.

5.6. Suggestions for Further Studies

I. Longitudinal Study on SFP and Academic Outcomes; Future research could adopt a longitudinal design to examine the long-term impact of school feeding programmes on pupils' academic performance. This would allow for tracking changes in literacy,

numeracy, life skills, and continuous assessment performance over several years and provide stronger evidence of causality between nutrition and learning outcomes.

II. Exploration of Contextual and Socioeconomic Factors; Further studies could investigate how contextual factors such as household income, parental involvement, teacher quality, and school resources interact with school feeding programmes to influence pupils' academic achievement. Understanding these moderating variables would help in designing more targeted and effective interventions that enhance the relationship between SFP and educational outcomes

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Appendix II. Questionnaire for Teachers

Dear Teacher,

I am Acura Fred a student of Gulu University conducting a study on *"School Feeding Program and Academic Performance of Learners in Government Primary Schools in Omoro District Uganda*". Please kindly response to these questions honestly. There are no right or wrong answers. Your views will be treated with utmost confidentiality and used for the purpose of the study only.

Instructions:

i. Tick the correct answer or write in the space provided.
ii. Use a Likert scale (5=Strongly Agree, 4= Agree,3=Disagree, 2=Strongly Disagree, 1=Not sure) to response appropriately in each case.

If you don't understand a question, please ask for help.

SECTION A: Background Information

1. What is your gender? [ ] Male [ ] Female

2. What is your age group? [ ] 20–29 years[ ] 30–39 years [ ] 40–49 years [ ] 50 years and above

3. What is your highest level of education? [ ] Grade III Certificate [ ] Diploma in Education [ ] Bachelor's Degree [ ] Postgraduate Degree [ ] other (specify): _____

4. For how many years have you been teaching? [ ] Less than 2 years [ ] 2–5 years [ ] 6–10 years [ ] More than 10 years

5. What class level(s) do you currently teach?

[ ] Lower Primary (P1–P3) [ ] Upper Primary (P4–P7) [ ] Both

Section B: School Feeding Program (IV).

Key: 5=Strongly Agree, 4=Agree, 3=Strongly Disagree, 2=Disagree, 1= Not Sure.

A	**Provision of Nutritious Meals**	**5**	**4**	**3**	**2**	**1**
01	We normally get nutritious meals from school					

02	Meals provided at school contains fruits, vegetables, proteins and grains					
03	All students are satisfied with the taste of meals served					

04	The meals served are adequate for all students					
05	School provide special meals for students with dietary restrictions					
06	The school involve parents or community in meals planning					
07	Nutritious meals help to improve students concentration and learning					
B	**Type of food given**	**5**	**4**	**3**	**2**	**1**
01	Meals served at school are of various types					
02	Fruits and vegetables are always included in the meals					
03	Meals served include proteins like beans, fish ,meat, eggs					
04	Drinks are provided during meals times					
05	Snacks like biscuits, chips are always given to learners					
06	Sugary foods and drinks are served at school					
07	Traditional or local food dishes are included in the meals					
C	**Quality of food given**	**5**	**4**	**3**	**2**	**1**
01	Food served at school are always fresh and good in quality					
02	Food served at school are clean and hygienic					
03	Food served at school provide good taste and nice					
04	Food served at school with the right temperature					
05	Food served at right portion and adequate to learners					
06	Food are prepared using safe cooking utensils and methods					
07	Food served are free from foreign materials like stone, hair.					
D	**Frequency of the meals**	**5**	**4**	**3**	**2**	**1**
01	Meals are provided to learners every day					
02	Learners are given breakfast in time and adequately					

03	Learners are given lunch in time and adequately					
04	Learners sometimes skip meals due to unavailability					
05	Special meals are provided during functions					

Section C: Academic Performance of Learners (DV).

Key: 5=Strongly Agree, 4=Agree, 3=Strongly Disagree, 2=Disagree, 1= Not Sure.

A	**Grades of passes**	**5**	**4**	**3**	**2**	**1**
01	Learners in my school often score good grades in exams					
02	The majority of learners pass with Division one or two in final exams					
03	There has been an improvement in grades of learners over the past two years					
04	Poor academic performance is common among learners in this school					
05	Teachers help learners improve their grades through extra lessons					
06	Continuous assessment contributes to improved pass grades					
07	Learners who attend school regularly perform better in exams					
B	**Results scored by Learners**	**5**	**4**	**3**	**2**	**1**
01	Most learners in this school score good marks in class tests					
02	Learners results reflect effective teaching and learning					
03	The results of learners are better when they are regularly assessed					
04	End of term results shows progress in learners academic performance					
05	High performing learners receive recognitions for their results					
06	Learners who participate actively in class score better results					
07	Results scored by learners are used to plan academic support programs					
C	**Continuous Assessment**	**5**	**4**	**3**	**2**	**1**
01	Continuous assessments help to improve learners academic performance					
02	Learners are regularly assessed through class tests and assignments					

03	Continuous assessment results are recorded and monitored					
04	Teachers use continuous assessment to identify learners weaknesses					
04	Continuous assessments motivates learners to study harder					
05	Continuous assessments help teachers to adjust their teaching methods					
06	Feedback from continuous assessments helps learners to improve					
07	Continuous assessments supports better performance in final exams					
D	**Literacy Competence**	**5**	**4**	**3**	**2**	**1**
01	Learner know how to spell simple English words					
02	Learners know how to write simple sentences correctly					
03	Learners can read and understand short stories in English					
04	Learners can answer questions after reading a passage or story					
05	Learners can write a short paragraph about your school or family					
06	Learners enjoy reading books or stories at home or in school					
E	**Numeracy Competence**	**5**	**4**	**3**	**2**	**1**
01	Learners can you solve simple addition problems					
02	Learners know how to subtract one number from another					
03	Learners are able to multiply small numbers correctly					
04	Learners can divide numbers without using a calculator					
05	Learners understand the concept place values (e.g., tens, hundreds, thousands)					
06	Learners can use numeracy skills outside school (e.g., in markets or at home)					

Thank you for participating.

Appendix III. Interview Guide for Head teachers.

Dear Head teachers,

I am Acura Fred student of Gulu University conducting a study on *"School Feeding Program and pupils Academic Performance in Government aided Primary Schools in Omoro District Uganda*". Please kindly response to these questions honestly. There are no right or wrong answers. Your views will be treated with utmost confidentiality and used for the purpose of the study only.

SECTION A: Background Information

1. Age: [ ] 30 – 40, [ ] 41 – 50, [ ] 51 and above
2. Gender: Male [ ], Female [ ]
3. Level of Education attained: Bachelor [ ], Masters [ ], PhD [ ], Others [ ]

Section B: Discussion Guide.

1. What is the status of school feeding program in your school (Omoro District)?
2. What is the level of Academic Performance in your school (Omoro District)?
3. What is the relationship between school feeding program and academic performance?
4. What are the challenges facing school feeding program in your school?
5. What measures should be put in place to mitigate the challenges facing school feeding program in your school?

Thank you for participating.

Appendix IV. Focus Group Discussion Guides for PTA and SMC Chairpersons.

Topic "*School Feeding Program and pupils Academic Performance in Government aided Primary Schools in Omoro District Uganda*"

Section A: Background Information.

Self-introduction by each member's present for the

discussion. Section B: Discussion Guide.

1. What is the status of school feeding program in your school (Omoro District)?
2. What is the level of Academic Performance in your school (Omoro District)?
3. What is the relationship between school feeding program and academic performance?
4. What are the challenges facing school feeding program in your school?
5. What measures should be put in place to mitigate the challenges facing school feeding program in your school?

Thank you for participating.

Appendix I. Focus Group Discussion Guides for Learners.

Section A: Background Information.

Self-introduction by each member's present for the

discussion. Section B: Discussion Guide.

1. What is the level of school feeding program in your school (Omoro District)?
2. What is the level of Academic Performance in your school (Omoro District)?
3. What is the relationship between school feeding program and academic performance?
4. What are the challenges facing school feeding program in your school?
5. What measures should be put in place to mitigate the challenges facing school feeding program in your school?

Thank you for participating.

Appendix V: Budget

Activity	Amount (UGX)
Proposal writing and binding	2,000,000
Field visit and questionnaire administration	4,000,000
Data collection and analysis	2,000,000
Report writing and book binding	1500,000
Stationary	1,000,000
Transport, accommodation and feeding	1500,000
Communication and data	300,000
Miscellaneous	300,000
Total	12, 600,000 Ug Shillings

Appendix VI: Work plan

Period	**Activity**
Jan to May, 2025	Proposal development
June to July, 2025	Pretesting instruments
July, .2025	Data collection
August, 2025	Data analysis
August, 2025	Dissertation writing
August, 2025	Submission of dissertation
September, 2025	Viva voce

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970