ASSESSMENT OF NATIONAL FEEDING PROGRAMME ON SCHOOL ATTENDANCE IN CHANCHAGA LOCAL GOVERNMENT AREA, NIGER STATE

BY

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ABSTRACT

Universal primary education is an essential social right of every child, which is vital for the achievement of sustainable development. The Federal Government toward making real the sustainable elementary education has initiated programmes and adopted several strategies which include the introduction of school feeding programme. The research therefore was carried out to assess the National feeding programme on public primary school attendance in Chanchaga Local Government Area. The objectives of the study amongst others were to evaluate the level of compliance of the State with the National school feeding guideline. In line with this, data for the study was gathered through primary and secondary sources, and analysed by the use of descriptive and inferential analytical methods. The research revealed that all the thirty-four (34) public primary schools in Chanchaga LGA are benefitting from the National school feeding programme and that majority (63%) of the public primary schools are within four of the eleven wards in the LGA. The menu used for feeding the pupils is approved by the State Government, based on crops grown by the local farmers within the State. Five hundred and forty (540) cooks were recruited from various communities where the benefiting public primary schools are located and all of these cooks are women. However, the pupils' average enrolment into school was higher before (17,307.8) than after (15,486.8) the commencement of feeding programme in public primary schools in the Local Government. On the other hand, pupils' average school attendance is higher (2,498,832 annually) after the commencement of school feeding programme in Chanchaga Local Government Area than before (2,081,160 annually) the commencement of school feeding programme. However, nine constraints to effective implementation of school feeding programme in the LGA were identified of which corruption ranked first position with an index of 4.39. It is therefore recommended among others, that Government should provide public primary schools in Makera and Nasarawa A wards so that pupils in these wards can have easy access to school as well as the feeding programme. Also, there should be machinery put in place to prevent the stakeholders from siphoning items meant for the National school feeding programme in Chanchaga Local Government Area.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Study

Access to universal primary education is a fundamental right of every child (UNICEF, 2010). Education is appreciated as a source of economic growth and development owing to the enormous expansion in the number of applications for its products and services worldwide (Ahmed and Arends-Kuenning, 2003). It is an essential social right, which is vital for the achievement of sustainable development. In the quest to carry out successfully the universal elementary education (Millennium Development Goal 2), and to ensure inclusive and equitable quality education access for all (Sustainable Development Goal 4), the Federal Government of Nigeria has shown intense commitment through policy directives and mediations by launching free universal basic education in 1999. This is to avail all children of school age the opportunity to be educated. Certain programmes, including the abolition of school tuition fees, improved measures of gender equity in elementary schools, and the introduction of nutrition and school feeding programmes were all strategies by the Federal Government toward making real the sustainable elementary education.

In 2005, President Olusegun Obasanjo launched the introduction of government school feeding programme as pilot programme in 13 states, but after a few years, only south western Osun state maintained it (Linus, 2018). The programme was aimed at improving the nutritional intake of schoolchildren as well as their retention in school. Only 2.5 million children or 10 per cent of the total population of primary school children were expected to take part in the pilot phase of the programme aimed at providing one meal per school day for every child in Nigerian schools (Xinhua, 2005). However, despite government effort at that time, the programme could not increase school enrolment and completion rates particularly

of children in rural communities and poor urban neighbourhoods, due to the government's implicit commitment (Xinhua, 2005).

In 2016, President Muhammadu Buhari administration reintroduced the home grown school feeding programme as part of his multi-billion naira funded National Social Investment Programme (NSIP) to address poverty, hunger and unemployment in Nigeria (Linus, 2018). The programme was also revived to encourage children from poor families have access to primary education and increase enrolment in schools. Social investment programme a key intervention programme, is aimed at reducing poverty and vulnerability, while improving human welfare and development (Aliogu, 2019). Out of several components of the NSIP, a unique key component, which is the home grown school feeding programme (HGSFP), was launched in 7 States of the Federation with the plan to provide pupils at the public primary schools, particularly those in the impoverished areas of the country with one nutritious meal per day(Ayinde *et al.*, 2020).

It is worth saying that school feeding programme (SFP) is crucial ingredient that enhances the human body growth and cognitive development. Therefore, children need a reliable food supply to meet the metabolic supplies of body growth and brain development (Shabani, 2018). Setting priority for SFP is fundamental in reducing the short- term hunger, providing learner's cognitive function and enhancing the learning environment (Lawson, 2012).

Over the years, the number of States benefitting from the school feeding programme has increased from seven (7) to thirty-three (33) including Federal Capital Territory. According to the information gathered from Chanchaga Local Government Secretariat, Enrolment of pupils for Niger State home grown school feeding commenced in 2016 with census conducted

in all the schools in preparation for the feeding programme. Having gotten the number of children in the public primary schools across the State, the programme fully commenced in 2017. This therefore shows improvement in the spread and sustainability of the programme across the Federation. Hence implementing the key objectives of the school feeding programme, which includes decrease starvation and undernourishment; increase school registration, attendance and academic performance; enhance local production of food, is an incentive for improvement of child education.

Overwhelmingly, it is also worth saying that the programme has not only focused on feeding children in public primary schools, it has also contributed to the improvement of livelihood of the people (cooks, food vendor and the farmer) engaged in the service delivery of the programme (WFP, 2019). In addition, it has created opportunity for children from poor families in particular to access free education which will eventually contribute to the development of the state and the nation at large. However, little has been discovered on school feeding programme as a vehicle for access to equitable quality education in Chanchaga Local Government Area (LGA).

1.2 Statement of the Research Problem

Education is not just a right but also a genuine tool for the economic and social development of any nation. Hence, there is a global effort towards increasing access to primary education across the globe (SDGs, UNICEF). However, even with the increasing effort by government

and international organizations, achieving progress to universal primary education in Sub-Saharan Africa (SSA) and Nigeria in particular remains painfully slow (UNICEF, 2018).

School feeding programmes are interventions that regularly provide nutritious foods to children and adolescents attending school (FAO, 2019). Generally, some of the benefits of school feeding from literature include alleviating hunger, reducing micronutrient deficiency and anaemia, preventing overweight and obesity, improving school enrolment and attendance, increasing cognitive and academic performance, and contributing to gender equity in access to education (Adelman *et al.*, 2008; Bundy *et al.*, 2018; World Food Programme (WFP), 2013; Aliyar *et al.*, 2015). Most countries of the world have some forms of school feeding programmes in some way and at some scale.

School feeding programmes are widely available in high-income countries but generally have incomplete coverage in low- and middle-income countries (LMICs) like Nigeria, where the need is greatest in terms of hunger and poverty (Bundy *et al.*, 2018). Most countries in sub-Saharan Africa only have school feeding interventions that are targeted toward the most food-insecure regions instead of being universally available. It is imperative to expand the coverage of school feeding programmes and to improve the quality of existing programmes to maximize their benefits on children and adolescents.

In 2016, Nigeria reintroduced the home-grown school feeding programme as part of the National Social Investment Programme (NSIP). Five years since the implementation of the programme, little is known about the impact of the programme on school enrolment and attendance in general. Previous studies or reviews on school feeding programme are either out-dated, out of scope or conducted in developed countries of the world (Kristjansson *et al.*,

2007, Jomaa *et al.*, 2011, Watkins *et al.*, 2015), thus they do not reflect all the current available evidences. For example, the studies of Kristjansson *et al.*, (2007) and Jomaa *et al.*, (2011) focused on physical and health outcome of the programme, but not on educational and social outcome. Obviously, most of the studies were conducted in developed countries and not underdeveloped countries like Nigeria where the programme is still at an infant stage.

Therefore, it is imperative to evaluate the effect of school feeding programme in Nigeria. Niger State, particularly Chanchaga local government area is one of the states that were enrolled into the programme in the early years of the programme. After five years of implementation, it has become imperative to evaluate the impact of the programme for review and improvement. There is therefore a need for an updated and refined synthesis of evidence on school feeding programme and wide range of educational outcomes of children as it is warranted and that will inform the design and implementation of future programmes. This study is therefore an attempt to evaluate the effect of the home-grown school feeding programme on educational (enrolment and attendance) outcome in Chanchaga LGA, Niger State.

1.3 Research Questions

i. What are the characteristics of school feeding programme across the wards in Chanchaga LGA?
ii. To what extent has the State Social Investment Programme complied with the National School Feeding Guideline? iii. What is the pattern of pupils' enrolment and attendance before and after the commencement of school feeding programme?
iv. What is the pupils' daily feeding pattern?

v. What are the constraints to effective implementation of the school feeding programme?

1.4 Aim of the Study

The aim of the study is to examine the effects of National feeding programme on public primary school attendance in Chanchaga Local Government Area with a view to suggesting ways of improving the programme.

1.5 Research Objectives

Based on the above stated aim, the objectives are to:

i. Assess the characteristics of school feeding programme across the wards in the Local Government Area; ii. Evaluate the level of compliance of the State Social Investment Programme with the National school feeding guideline; iii. Examine the pattern of pupils' enrolment and attendance before and after commencement of school feeding programme;

iv. Assess the pupils' daily feeding pattern;

v. Assess the constraints to the school feeding programme

1.6 Significance of the Study

This research provides an insight to the number of school children that have access to school feeding programme in the various geo-political wards in the LGA. Identifying the proportion of children that are benefitting from the school feeding programme in the various wards serves as a basis for planning, evaluation and improvement of the school feeding programme to meet the desired objectives of the programme. This information gathered further provides

basis for determining the level of equity in the spatial distribution of the programme. The study further reveals the inequality in terms of resource allocation that the wards are faced with and possible ways of reconciling it.

In addition, this study provides requisite information on the level of compliance of the benefiting institutions to the programme's guideline; particularly in the area of the type of food, the quantity and quality of food, the remuneration of the cooks, the time-table for the meal amongst other requirements. Furthermore, the information provided will serve as a guide for the regulatory authority to properly assess the performance of the school feeding programme in the various schools in the Ward against the stipulated guideline. However, the information gathered will help to evaluate the outcome of the programme and also serve as basis for addressing schools that do not operate within the ambit of the school feeding programme official guideline.

Furthermore, with the information gathered from the study, factors that make or mar children's access to the programme either spatially or quality-wise will be adequately addressed. Such factors include proximity of the benefitting schools to different areas of the wards, availability of the facility required to cater for the programme and the space requirement for the available facility among others. This will create an insight for Government to know which ward in the LGA is enjoying more of the school feeding programme and hence know how to spatially distribute the school feeding programme for equity. Knowing this, the number of deprived children that are outside the service radius of schools benefitting from the National feeding programme will adequately be catered for.

Lastly, through the research findings, stakeholders will be adequately educated on the operations of the National school feeding programme in the public primary schools in the LGA. Positive outcome will get them committed to the sustainability of the programme while negative effects of the programme if established will also be addressed.

1.7 Scope of the Study

This research covers records of 5 years before (2012 -2016) and 5 years after (2017– 2021) the commencement of school feeding programme in public primary schools in Chanchaga Local Government Area of Niger State. The study is restricted to all the eleven (11) geopolitical Wards in the study area. The wards are namely: Limawa (a), Limawa (b), Makera, Minna Central, Minna South, Nassarawa (a), Nassarawa (b), Nassarawa (c), Sabon Gari, Tudun Wada North and Tudun Wada South. The study is to assess carefully what constitute the characteristics of school feeding programme in public primary schools in the wards across the LGA. These characteristics include number of schools benefitting from the national feeding programme, number of children in these schools, number of food vendors employed for the programme (per school), type of food served, volume of food served, where food is sourced and cooks remuneration. The level of compliance of the state social investment programme with the national school feeding guideline was also investigated. The study also examined the pattern of pupils' enrolment and attendance before and after the commencement of the school feeding programme in the schools. The pupils' daily feeding pattern was also assessed to have the clear understanding of the nutritional schedule of the pupils. Lastly the constraints to effective implementation of the objectives of the school feeding programme were assessed for policy recommendation.

1.8 The Study Area

1.8.1 Location of Minna

Minna, the Capital of Niger State, is located at 9.62 latitude and 6.55 longitudes with 243m elevation above the sea level (World Atlas, 2019). Minna is surrounded by Shiroro Northwards, Paikoro Eastwards, Katcha Southwards and Wushishi in a Westerly direction. Minna is divided into two Local Government Areas namely Bosso LGA and Chanchaga LGA. Map of Nigeria showing the location of Niger State is presented in Figure 1.1 while the map precisely indicating Chanchaga Local Government Area which is, the study area, is presented in Figure 1.2.

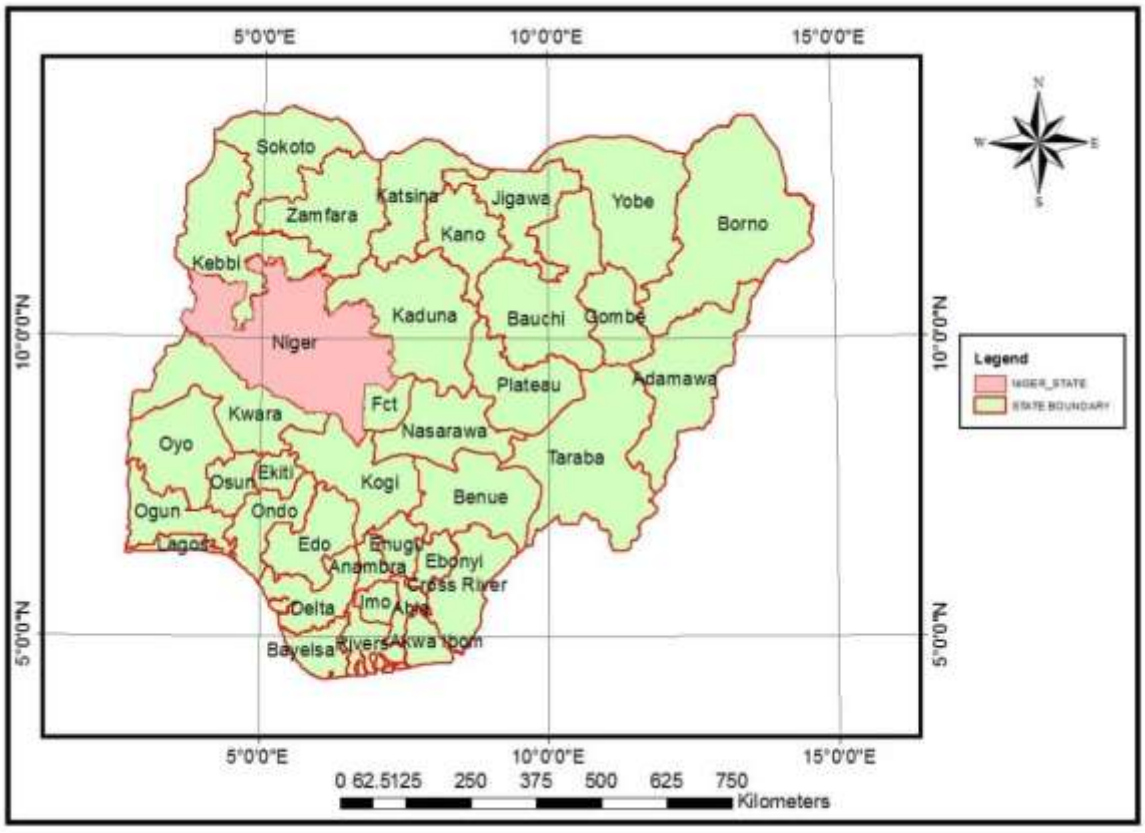

Figure 1.1: Nigeria Map indicating Niger State Source: Grid3 Nigeria, 2021

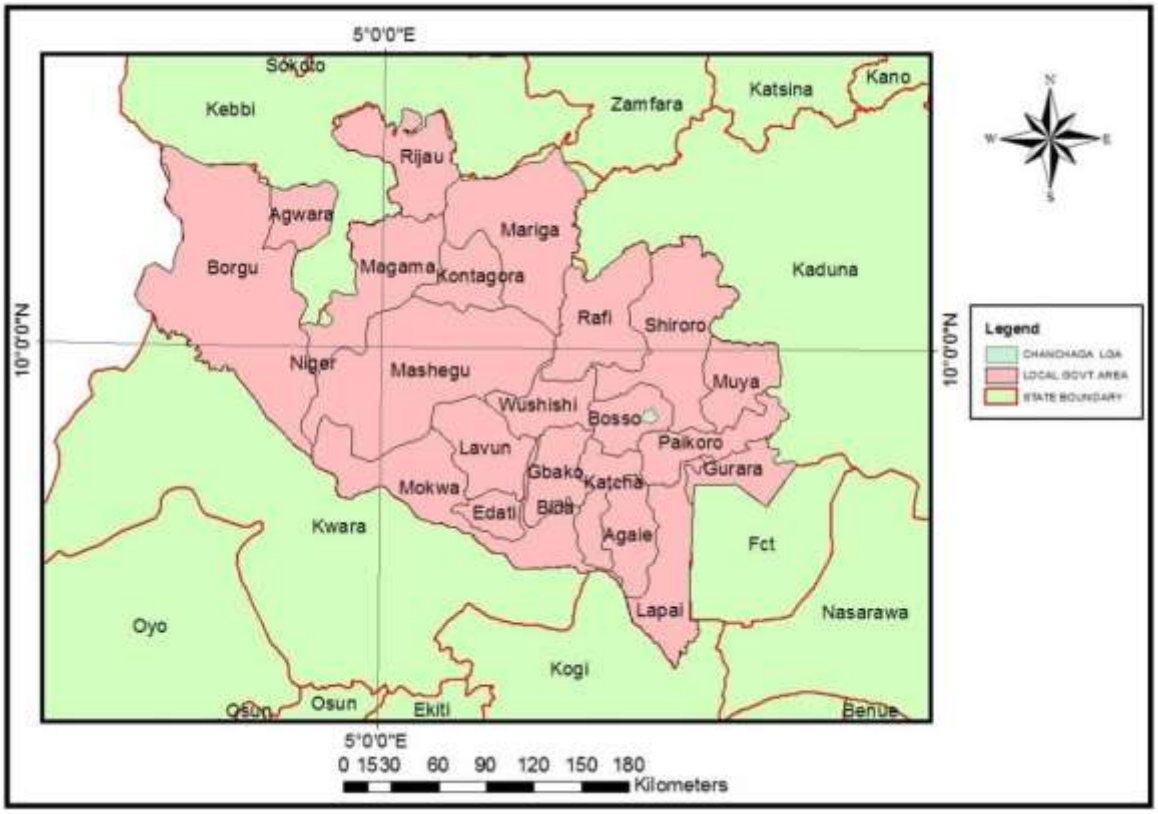

Figure 1.2: Niger State Map indicating Chanchaga LGA
Source: Grid3 Nigeria, 2021

Out of the twenty-four (24) Local Government Areas in Niger State, Chanchaga LGA alone constitutes eleven (11) geo-political wards. The map indicating the geo-political wards in the study area is represented in Figure 1.3.

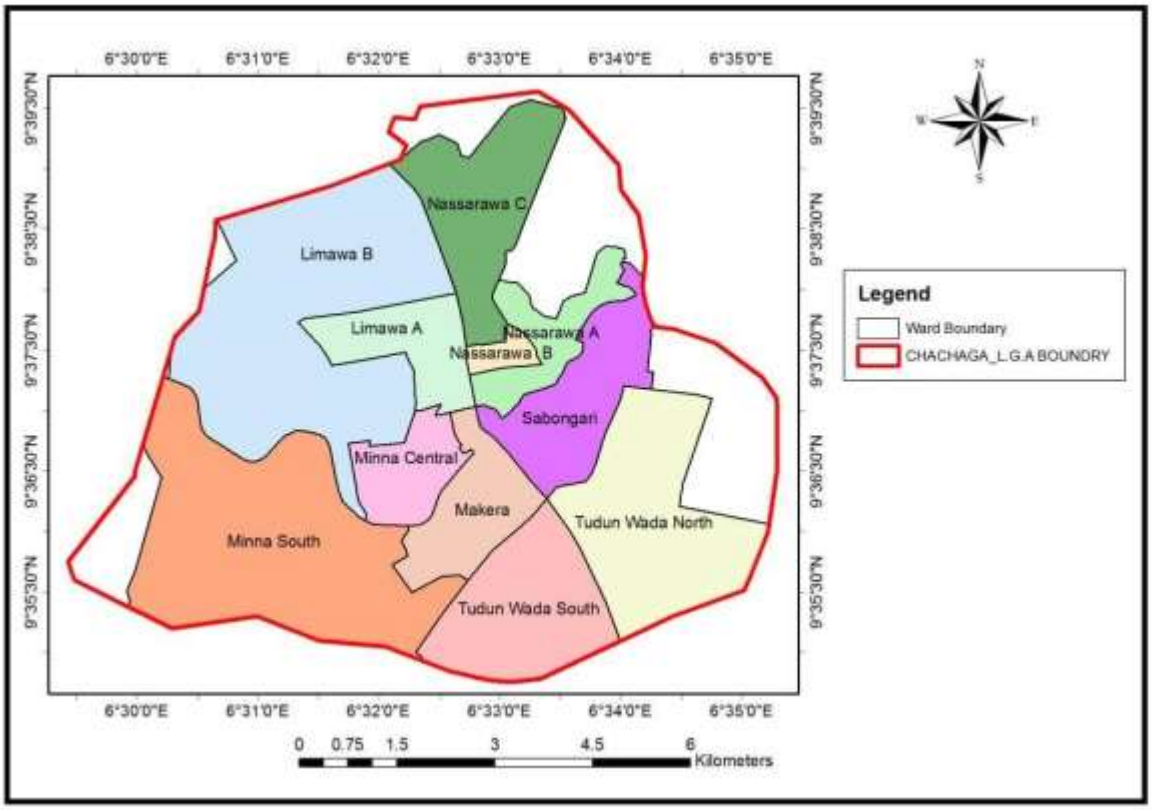

Figure 1.3: Map of Chanchaga LGA indicating the Geo-Political Wards
Source: Researcher's Digitized Work from Grid3 Nigeria, 2021

1.8.2 Education

The number of all the public schools (primary, secondary and tertiary) in Chanchaga Local Government Area are summed up to sixty-five (65) (Niger State Bureau of Statistics, 2011). The primary schools, which, offer conventional and integrated quranic education accounts for thirty-four (34) public schools in the study area. The secondary and technical training college accounts for twenty-seven (27) while higher institutions are only three in the study area (Niger State Bureau of Statistics, 2011). All these schools are evenly distributed within the LGA. The secondary schools include both junior and senior secondary category. There are also government science schools offering mainly pure sciences; technical colleges mainly for training in technical and vocational subjects; and the conventional schools that offer both

sciences and social science subjects. Fees for education in the public schools are relatively cheap and affordable compared to the private schools.

1.8.3 Population distribution

Niger State, measuring 6, 892, 500 hectares / 68, 925 square kilometres, in 1991 had a total population of 2,421,581 people. In 2006, the total population of the State increased to 3,954,772 (Niger State Bureau of Statistics, 2011). Chanchaga LGA of Minna in 1991 had summed -up population of 143,896 people, of which, 70,133 were male, while, 65,743 were female. Total population of the LGA in 2006 increased to 202,151; with the males accounting for 105,265 and the females accounting for 96,886 (Niger State Bureau of Statistics, 2011). Using the formula for population projection [$Pr = Pb(1 + r/100)n$] and growth rate of 3.5% as obtained in Niger State, the estimated projected population of
Chanchaga LGA in 2020 was 327,221.

1.8.4 Economic base

The economic base of the LGA under study is not different from that of the entire state. Agriculture, which serves as booster of the economy of any nation, has a great positive impact on the economic development of the entire State and the LGA in particular. Farming is one of the occupations of the indigenes whether they are engaged in formal or informal sectors. Farm produce sold within and outside the state contribute to generating revenue and improvement in the people's livelihood. Rental services also add up to the economic base of Chanchaga LGA. Rents received on office spaces, residential facilities and commercial facilities serve as stimuli to robust economy. Though some neighbourhoods in the LGA are

still undergoing growth, if fully developed, the potentials of achieving full economic growth will become a reality.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 History and Evolution of School Feeding Across the Globe

School feeding began in 1790 and 1867 in Germany and France respectively (FAO, 2005). Richter *et al.* (2000) and Haile (2019) traced the evolution of school feeding in the United States and United Kingdom to 1930s. They noted that the original aim of school feeding was to improve child growth thereby incorporating it into their national development programmes. Haile (2019) reported that school feeding began in Brazil in 1945 during the Second World War. In Austria, school feeding programme was initiated in the 1940s as a humanitarian assistance aimed at combating acute child malnutrition after the Second World War (Adekunle *et al.*, 2016).

Tijjani *et al.* (2017) noted that in South Africa, school feeding began in the 1940s with the supply of free milk to schoolchildren. Missan (2011) traced the evolution of school feeding in Tanzania to 1956. In Ghana, school feeding began in 2005 (Awojobi, 2019). Although the primary goal of school-feeding may differ between countries, it is a widespread practice. In year 2004 alone, the World Food Programme (WFP) initiated school feeding in 72 countries with 16.6million schoolchildren as beneficiaries (WFP, 2005). WFP (2013) estimated that there were about 30million schoolchildren receiving school feeding in Africa in 2013. In fact, Awojobi (2019) noted that many African countries have adopted the idea of school feeding owing to its positive impacts.

Tijjani *et al*. (2017) reported that school feeding programme in Borno State, Nigeria can be traced to the 1970s. They recounted that majority of public schools in Borno were boarding

schools where feeding was provided by the government; however, these schools were later converted to day schools and feeding was withdrawn. In 2005, President Olusegun Obansajo launched the introduction of government school feeding programme but couldn't sustain it due to government implicit commitment to the programme (Linus, 2018). The present school feeding programme in Nigeria began in year 2016 as part of the fulfilment of the campaign promise of the federal government to overhaul educational sector on the one hand, and as a social investment on the other (Tijjani *et al*., 2017).

2.1.1 School feeding programmes in developed and less-developed countries School Feeding Programme coverage according to WFP (2013) is rather low in countries where there is high poverty and by extension, high child poverty rate and hence, the need to take it to these places. Food is generally available through the SFP to children from developed and middle-income countries and most children from poor families usually received subsidized or free meals as a right while in less developed or developing countries the School Feeding Programme rather provides food to some children in certain deprived areas as is the case with Ghana. The report statistics revealed that 49% of school children received free meals in middle-income countries, while in low-income countries the percentage of school children receiving free meals stood at 18% (WFP, 2013).

School Feeding Programme in lower-middle-income countries for instance indicated that, Timor-Leste has the largest coverage of 49%, Ghana has 8% and the country with the least coverage goes to Indonesia with less than 1% (WFP, 2013). Liberia had the largest coverage of 18% while Uganda had the least coverage of 1% in terms of coverage of the programmes in low-income countries. Burkina Faso, Haiti and Liberia were found to have covered almost

all primary school pupils with the Programme in spite of these general low statistics among low-income countries (WFP, 2013). By implication, coverage continues to be low in poor countries where there is high rate of poverty, hunger and poor social intervention apart from these three countries.

The implementation of the SFP in less developed nations is largely based on the availability of development assistance from developed nations or its development partners. All over the world, external development support contributes little to overall cost of the SFP, accounting for less than 2% of the total school feeding cost. Donor funding however, accounts for 83% of the resource allocated to School Feeding Programmes in less developed countries (WFP, 2013). This is a demonstration of both the level of need in less developed nations and the priority accorded to the activities of SFP by their governments.

2.2 Conceptual Framework

2.2.1 The concept of school feeding

School feeding is conceptualised as an act of providing food for schoolchildren (Bundy *et al*., 2009; Tijjani *et al.,* 2017). According to Oyefade (2014), school feeding programme has several models and countries have adopted one or a combination of these models based on the objectives of the country. Bundy *et al*. (2018) classified the concept of school feeding into two broad perspectives, namely: in-school feeding and take-home rations. As Tijjani *et al*. (2017) and Aurino *et al.* (2018) explains, in-school feeding is a situation whereby the students/pupils are given food within school premises; while, on the other hand, take-home rations represent a situation where the students/pupils are given a specified measure of food/foodstuff to take home. It can also involve directly providing the parents of the

students/pupils a specified type of food so as to improve the nutritional intake of the households, improve the physical and mental wellbeing of the schoolchildren (Sullivan, 2002; Broca and Stamoulis, 2003; Bundy *et al.*, 2009).

According to World Food Programme (WFP, 2019) the essence of having food at school every day does not only mean better nutrition and health, it also translates into increased access and achievement in education. WFP (2019) reported that lack of food in the stomach is one of the reasons children do not turn up for school and if they do turn up on an empty stomach, focussing on lessons becomes hard. Therefore, school feeding is a strong incentive to consistently send children to school. A study of Madagascar by World Food Programme (WFP, 2019) indicated that the introduction of take-home rations increased school enrolment from 88% to 98% within the first two years.

As a result of this cross-cutting scope of school feeding, Alderman *et al.* (2018) reported that the dividends of school feeding and other social protection efforts have been enjoyed by an estimated 1.9billion adults and children globally. The social protection perspective to school feeding was the subject matter of the study by Bundy *et al*. (2009). The rationale behind the school feeding programme is to ensure that children are safeguarded against malnutrition and food insecurity, while at the same time, helping to reduce poverty and enhance health (Broca and Stamoulis, 2003). In the opinion of Aurino *et al.* (2018), however, school feeding programmes may also be associated with negative outcomes,
especially in conflict situations.

Drake *et al.* (2018) conceptualised school feeding programme as contributor to multiple objectives which include social safety nets, education, nutrition, health, and local agriculture. Aurino *et al*. (2018) see school feeding as an effort towards ensuring the social protection of school-age children. Food and Agricultural Organisation (FAO, 2019) argues that school feeding is one of the cardinal approaches in ensuring social protection. They maintained that it is a sustainable approach reduction and human capital development. It should be noted that the notion of human development is comprehensively captured in the Human Development Index (HDI). The HDI, *inter alia*, is an index of development which is measured by three indicators, namely health, literacy level and income (Sanusi, 2007). A critical examination of school feeding programmes indicates that it is capable of contributing positively to the three indicators of Human Development Index (Drake *et al*., 2018; Nandi *et al*., 2018). Hoddinott *et al*. (2013) maintained that school feeding can lead to better developmental outcomes in children at different stages of their lives. This is further illustrated in the lifecycle approach to early childhood interventions in Figure 2.1.

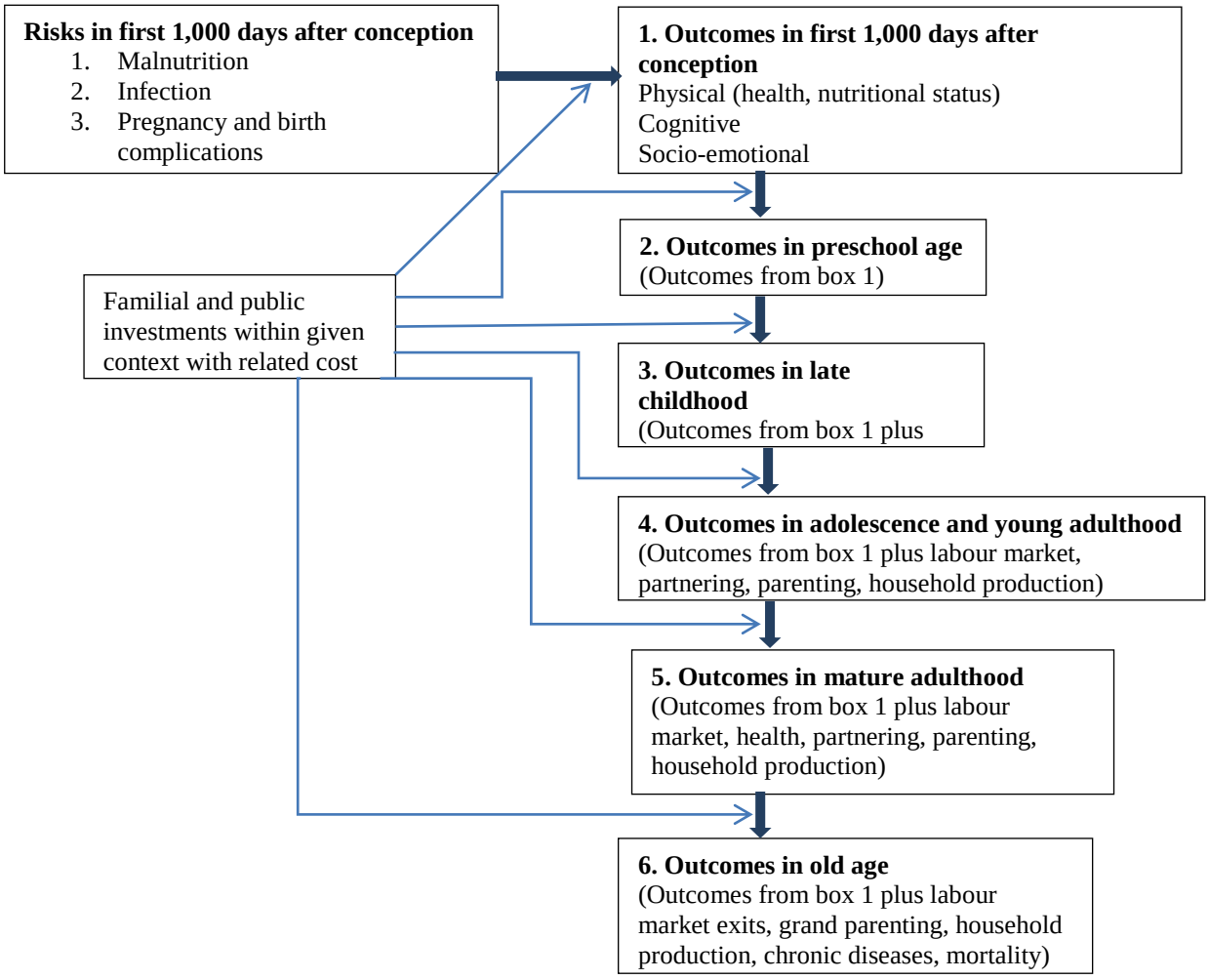

Figure 2.1: Lifecycle approach to early childhood interventions
Source: Hoddinott *et al*. (2013)

2.2.2 The concept of human development index

Sub-Saharan Africa has been faced with multiple issues of low human capital development. Similar to the poor rate of human capital development in the region is the problem of weak financial capital development. As a result, most countries in the region rank grossly below acceptable standard on the Human Development Index (HDI). Human Development Index was developed by UNDP (1990) as a critique of the GDP-based metrics of measuring

development. Further from the GDP approach which measures development based on national income alone, (Sanusi, 2007) noted that the Human Development Index measure development based on three key indicators, namely literacy level (measured in terms of number of years spent schooling), health (measured in terms of longevity, nutrition and food security), and income (measured in terms of GDP per capita).

In addition to the Human Development Index measure of development, Sen (1981) proposed entitlements as a measure of development. Entitlements, as Sen (1981) argued, are premised on food and consumption. However, Leach *et al.* (1997) argued further that entitlement is just not about food alone, but entails the range of possibilities that people can have. Similar to the argument of Leach *et al*. (1997) on the concept of entitlements, Sanusi (2007) linked human development to accessibility of basic human needs (food, housing, education and health) for the purpose of achieving improved standard of living.

Gough and McGregor (2007) narrows Human Development Index (HDI) to take account of what people can do and be, and how they feel about what they can do and be. Human development is the process of improving people's capability through reducing deprivations. UNDP (2000), while maintaining this process thought, defined human development as the process of widening the choices available to individuals in terms of basic human needs. This definition, while highlighting the importance of human needs, reflects the fact that choices in terms of basic needs could be restricted or widened. The significance of Human Development Index in the measurement of welfare and socioeconomic issues (including social investment programmes in general and School feeding programme in particular), therefore, cannot be overemphasised. To buttress this claim, Sanusi (2008) noted that: *"…the index has become*

a major technique of measuring human welfare… With this approach, human development is seen not only in terms of income of people but also in terms of other welfare variables, which also directly influence quality of human beings…. By way of interpretation, the higher the HDI, the higher the quality of human life and the lower the level of deprivation and poverty among the people…. the implication is that human development is higher if more people are educated…."

2.2.3 School feeding - sustainable development goals nexus

The sustainable development goals aimed at achieving progress in global development of humanity (Nazar *et al.,* 2018). Nazar *et al*. (2018) also noted that SDGs are vital indicators for measuring national development in line with global best practice. In the United Nations' 2030 Agenda for Sustainable Development, Goal 4 specifically focused on achieving quality education (United Nations, 2015; Klapper *et al*., 2016).

Bundy *et al*. (2009) observed that school feeding is usually implemented for the purpose of achieving the education goal of the SDGs. This is a partial explanation for Lawson's (2012) identification of school feeding as 'food for education'. Owing to the inestimable value of school feeding in contributing to the educational development of children, the World Bank included it in its US$1.2 billion Global Food Crisis Response Facility (Grosh, *et al.,* 2008). In fact, Bundy *et al.* (2009) and Boeren (2019) noted that school feeding programmes are among the first priorities of social safety net responses.

School feeding can also help in achieving other goals of the SDGs. For instance, it can help in achieving Goal 1 (poverty eradication) through employment of vendors (Klapper *et al*., 2016). With regards to its ability to reduce poverty, World Food Programme (WFP, 2019) reported that about 95,000 women have been employed in the school feeding programme and that 70% of the food is locally produced – especially by the women. WFP (2019) further maintained that school feeding helps reduce household food expenditure by at least 10%, thereby encouraging substantial amount of savings among the low and middle income households. It can also help in achieving Goal 2 (zero hunger) because it eradicates food insecurity and general hunger among children (Nazar *et al.*, 2018).

Similarly, as Hoddinott *et al.* (2013) and Nazar *et al.* (2018) further observed, school feeding can lead to the actualisation of Goal 3 (good health and wellbeing) by eradicating malnutrition and eliminating food-based epidemics and stunting. More so, it is important to note that school feeding is a vital approach towards achieving Goal 10 (reduced inequality) among children (FAO, 2019). Consequently, United Nations Educational, Scientific and Cultural Organization (UNESCO, 2000), United Nations (2015) and Boeren (2019) argued that the vision of sustainable development revolves around the quality of education of children.

2.2.4 Nexus between school feeding programme and school enrolment and attendance

According to a study conducted by Azurilah (2020), a direct link exists between school feeding and education. It is a social intervention that motivates and addresses the needs of school children. Through the instrumentality of SFP, children's drive to attend school and

their capacity to learn are enhanced, thereby increasing children's access to education particularly in areas with low school enrolment. The Mid-Day Meal Scheme (MDMS) which was launched in India in 1995 was the largest school feeding programme worldwide.

It covered 113.6 million school children as at 2011 with a total expenditure of about US$3,850 million (WFP, 2013). Several assessments and evaluations on the effects of the SFP have been conducted since 2001 in India and the results have almost always shown that, the programme contributed positively towards improving enrolment, attendance, retention and elimination of classroom hunger.

Data on total primary enrolment rates for 2001/2002 and 2007/2008 revealed a geometric increase. Enrolment for instance, increased to 103.1% for boys and 82.3% for girls in 2001/2002 academic year and also increased to 132.3% for boys and 116.7% for girls among the Scheduled Castes. In the Scheduled Tribes, enrolment also rose from 106.9% to 134.4% for boys and 85.1% to 124% for girls within the same period (WFP, 2013). A SFP impact assessment of the India's Mid-Day Meals (MDM) programme as stated in Dreze and Kingdon (2001) revealed that school attendance among girls improved by 15% in schools that were benefiting from the programme than in non-beneficiary schools.

However, in respect to boys' enrolment, it appears there no noticeable effects of the programme.

Also, the Community-based School Feeding Programme which began in 2006 in Guyana and aimed to increase community involvement in schools management, increased enrolment, attendance and enhance nutritional status as well as children learning capacity. Three different surveys according to the WFP (2013), were conducted in 2007, 2008 and 2009 in

two of the poorest regions of the country by the government in partnership with World Bank and Social Development Incorporation to assess the impact of the programme and the findings of the surveys showed huge contributions of the programme on school enrolment, attendance and retention of pupils. For example, enrolment increased by 16% in beneficiary schools within the period.

The introduction of the School Feeding Programme in the statement of Bundy *et al.* (2009), had led to a substantial increase in enrolment, particularly for girls. Total enrolment improved by 28% for girls and 22% for boys in the first year of School Feeding Programme according to the result of a meta-analysis from a survey data collected from 32 countries in Sub-Saharan Africa by WFP (Bundy *et al.*, 2009). Enrolment increment however depends on the type of programme implemented. In areas where only in-school meals were provided, for example as reported by Bundy *et al.* (2009), increase in enrolment occurred in the first year and total enrolment of girls returned to rates comparable to those prior to the inception of the programme. However, in schools where the SFP combined on-site feeding and take-home rations, enrolment increased becomes sustainable as girls' total enrolment rose by 46% per year, twice more than the annual increase in schools implementing only on-site feeding. The take-home food provided by the programme therefore helped the children especially girls to progression through the primary school grades.

In Pakistan, the School Feeding Programme also boosted girl child education as records indicated that 48% of households were not sending any of their daughters to school before the introduction of the programme and all households after the implementation of the programme; educate at least one of their daughters. Relatedly, in Bangladesh the take-home

food programme improved girls' enrolment in programme schools by 44% and boys' enrolment by 28%, whereas enrolment increased by 2.5% in non-programme schools within the same period (Ahmed and Del-Ninno, 2002). In Ghana, a research conducted by Yendaw and Dayour (2015) on school feeding and school enrolment in the Nyoglo District disclosed that the SFP increased pupil's enrolment from 35.8% to 64.2% after the implementation of the programme. This is a substantiation of WFP report of 2013 in Burkina Faso, India and that of Guyana which presented School Feeding Programme art as an incentive for children to enrol into schools and therefore has the potentials if well implemented, to end illiteracy in the Kasena Nankana West District and the whole of Ghana and sustained.

Similarly, a research conducted in some beneficiary schools in Kwaebibirim District of Ghana discovered that Ghana School Feeding Programme was the main factor that triggered an increment in enrolment of beneficiary schools. Within the 2007/2008 and 2008/2009 academic year for instance, when the programme was new, enrolment increased by 66.2% with girls benefitting most from the increment. The outcome of their study is also in tandem with other previous studies such as that of Yendaw and Dayour (2015), and Ahmed (2004), which all corroborated that, there is a strong nexus between school feeding programme and children enrolment.

As reported by WFP (2014) the assessment of school feeding programme in Burkina Faso showed significant increase in school enrolment, attendance and retention. Beneficiary schools were also recording consistently lower repeater rates, lower drop-out rates especially in disadvantaged provinces, and higher success rates on national examinations. Three month assessment of the pilot School Feeding Programme in Malawi indicated 5% increment in

enrolment (WFP, 2014). In Kenyan where pre-school children received meals at school, attendance increased by 8.5% than schools without school feeding (Kiilu and Mugambi, 2019). A comprehensive analysis of these and other research works on SFP in less developed countries also indicated significant improvement in attendance for students receiving in-schools meals as compared with students without in-school meals.

In Burkina Faso, evaluation of School Feeding Programme as reported by World Food Programme report (2014), indicated that an increase in pupil's attendance, high retention rates and lower drop-out rates in deprived provinces, attendant higher success rates on national exams, especially among girls were associated with school canteens. The report further revealed that, in Malawi, an evaluation of a pilot school feeding programme over the period of three month indicated 36% increment in pupil's attendance in schools with canteens as compared to schools without canteens. Whenever canteens are closed, even temporarily there was immediate high rate of absenteeism and drop-out (WFP, 2014).

On school attendance, another study carried out by Yendaw and Dayour (2015), with the objective of establishing the contributions of SFP on pupils' attendance to school in the Savelugu-Nantong Municipality, Ghana, revealed that the programme hugely contributed towards pupil's attendance and retention in beneficiary schools. According to study's result, only 22% of the pupils were attending school throughout the week before the inception of the programme while 36.7% of the pupils were attending school three times or less in a week. However, after the implementation of the programme, pupils' attendance to school throughout the week stood at 65.4%. This goes to copiously establish that the introduction of the SFP contributed immeasurably towards the phenomenal increase in pupils' school

attendance. His study further revealed that the SFP also improved retention rate in beneficiary schools in the Municipality. Also, before the introduction of the programme drop-out rates among pupils in the Municipality was as high as 73.8% and after, the dropout rate reduced to 26.2%. One major successes of the Ghana School Feeding Programme is its contributions towards increasing school attendance and retention (Atta and Manu, 2015).

2.2.5 School feeding programme-poverty reduction nexus

The relationship between school feeding programme and poverty reduction has received little research attention. However, in attempting to establish this link, the works of Eliasu (2013) World Bank (2018) and WFP (2019) are very commendable. For instance, while the World Bank (2018) noted that the programme has improved employment and consequently reduced unemployment and poverty among the vendors, Eliasu's (2013) study in Ghana specifically introduced gender dimension into the debate by reporting that most of the vendors are women. Nevertheless, it is clear that the social investment programmes in general and school-feeding programme in particular reduces the incidence of poverty (WPF, 2019).

2.2.6 School feeding programme and its impact

Approaching the issue of social investment programmes through the lens of school feeding programme, it has been argued by Olusanya (2010); Osun State Ministry of Education (2014); Taylor and Ogbogu (2016) that school feeding programme has yielded positive results in terms of improved academic performance, enhanced nutrition of school children and improved socioeconomic condition of the school food vendors.

Specifically, on the issue of improved academic performance, Taylor and Ogbogu (2016) have reported an upsurge in school enrolment in Osun State, Nigeria as a result of the implementation of school feeding programme in the State. Similarly, Aliogu (2019) have reported an improvement in school attendance. More so, findings from Taylor and Ogbogu (2016) have shown that, on the average, academic performance of public school children have improved since the adoption of the school feeding programme. Furthermore, Olusanya (2010); and Yunusa *et al*. (2012) have emphasised, through in-depth studies, that school feeding programme have a significant impact on the nutrition status of public school pupils. Based on these studies, it is obvious that school-feeding programme is related to Sen's (1981) concept of entitlement. Similarly, based on the argument of Sanusi (2008) that human development is higher if more people are educated, it is clear that the school feeding programme will produce sustainable returns on the long-run in terms of human development in Nigeria.

2.2.6.1 ***Impact of school feeding on school enrolment and academic performance*** Several studies have established the relationship between school feeding and school enrolment on the one hand, and academic performance of the pupils on the other. Yendaw and Dayour (2015) evaluated the impacts of school feeding on school enrolment, school attendance and academic retentiveness of pupils in Ghana. Data was collected using interview schedules and oral interview. Frequency and Chi-Square analyses were conducted on the data collected. It was discovered that school feeding has increased school enrolment rate and attendance rate and enhanced the retentiveness of pupils. Chi-Square test revealed that school dropout rate decreased significantly with the introduction of school feeding programme in Ghana. The

study suggested the need for concerted and serious stakeholders' commitment towards ensuring the sustainability of the school feeding programme.

Adekunle and Ogbogu (2016) assessed the impacts of school feeding on school enrolment and academic performance among elementary pupils in Osun State, Nigeria. The survey design approach was adopted for the study. Random sampling was used to administer 116 copies of questionnaire to the respondents, while purposive sampling was used to select 23 officials of the school feeding programme in the State. Descriptive analysis was conducted and the findings revealed that school feeding programme has led to increase in enrolment and improved punctuality. The contribution of school feeding to pupils' retention was found to be low. It was also discovered that inadequate funding, insufficient learning space and poor monitoring are the major factors militating against the success of the programme in Osun State. It was recommended that stakeholders should improve on their funding and management of school feeding in order to guarantee effectiveness of the programme.

McEwan (2013) analysed the implications of school feeding programme on educational outcomes in Chile. The study applied the regression-discontinuity approach to analyse the data obtained from the field survey of schoolchildren in Chilean public schools. McEwan (2013) found no correlation between school feeding and school enrolment/attendance rate. It was also observed that there is no evidence to suggest that school feeding retentiveness among schoolchildren in Chile. The study concluded that this lack of correlation may be connected to the overreliance of caloric intake as the sole measure of the quality of food consumed. It was therefore recommended that social protection policies should focus on nutrition composition of the food supplied, rather than the caloric composition alone.

Shabani (2018) focused his research on the impact of school feeding programme on pupil's academic performance in Mlunduzi ward, Tanzania. The study established a correlation position that separates the pupils' academic performance before and after the commencement of the school feeding programme. The cross-sectional survey design was used for this study. Descriptive statistics was used to analyse data collected using the questionnaires and focus group discussion. A checklist was used to validate data from learners and teachers through the focus group discussion. The study exposed that school feeding programme has shown significant impact on increased examination performance, helped to get learners into school, enhancing enrolment and reducing absenteeism. The assessment of examination scores in the period before and during school feeding programme had shown that learners got better in an examination during the school feeding programme than before. The study therefore recommended that in practice school feeding programme is difficult interventions; it can be with advantages if the policy makers and implementers can benefit from a careful examination of the programme by involving local communities than depending on donors so as to ensure sustainability of the programme.

Milledzi *et al*. (2017) examined the impact of the school feeding programme on access to basic education in the South Tongu district in the Volta Region, Ghana. The study employed a convergent parallel mixed method research design and the respondents selected for the study were selected using a stratified random sampling and purposive sampling procedures. Descriptive statistics and thematic approach were used for the analysis of the data collected using the questionnaires, interviews and focus group discussion. The study found out that school feeding programme has a significant impact on increased enrolment, attendance and retention of pupils in the South Tongu district. However, it also discovered that the

implementation of the programme has put pressure on teaching and learning materials as well as increased teacher-pupil ratio. The study therefore recommended that plans and measures be put in place by the government, implementation ministries and agencies on how to increase existing human, physical and financial resources for the school feeding programme to be sustained.

Haile (2019) investigated the sustainability of school feeding in Ethiopia. Purposive sampling was used to select parents, teachers and students for the study. Descriptive analytical techniques were adopted and it was found that school feeding programme in Ethiopia has several positive impacts such as increased enrolment, improved academic performance and enhanced retention among schoolchildren. However, Haile (2019) discovered that school feeding programme in Ethiopia is fraught with a number of challenges such as weak institutional capacity for long term sustainability of the program, unsupportable enrolment rate and poor sectorial engagement. They suggested that government should redesign the school feeding programme and entrust it to an independent organised body that will help in ensuring the achievement of the goal of the programme.

2.2.6.2 *Nutritional health impact of school feeding programme*

Several studies have established the relationship between the impact of school feeding and nutritional health of the schoolchildren. Tijjani *et al*. (2017) appraised the nutritional and health of school feeding in Maiduguri, Nigeria. The mixed methods research approach was adopted and data collection was done with the aid of structured and Likert Scale questionnaire. Chi-Square test was carried out and it was discovered that school feeding does not reduce hunger and malnutrition among schoolchildren. This is antithetical to the findings

of majority of the studies on school feeding. However, Tijjani *et al*. (2017) explained that this may be connected to the unstable provision of food to schoolchildren and poor food literacy among the vendors in the State. They therefore recommended that the government should improve on its effort towards implementing the school feeding programme. They also suggested the need to employ qualified food scientist to run the school feeding programme in the State.

Awojobi (2019) evaluated the nutritional and health impacts of school feeding in Ghana. The study was based on an extensive review of literature. Content analysis was conducted and it was discovered that school feeding contributes significantly to the nutritional intake of pupils. It was also discovered that school feeding contributes to the health outcomes of schoolchildren. Awojobi (2019) suggested the need for further studies on the positive impacts of school feeding on food security and poverty reduction.

Jomaa *et al.* (2011) investigated the impacts of school feeding on the health and educational outcomes of children in developing countries. Their study was essentially based on extensive review of literature and the analytical technique adopted was content analysis. It was discovered that school feeding improves caloric intake, increases school enrolment and leads to an improvement in school attendance. However, the relationship between school feeding and child cognitive development, as well as the difference in academic achievement between children who benefit from school feeding and children who do not, were less evident. The study therefore recommended the strengthening of the design, funding and implementation of school feeding in developing countries.

Olumuyiwa *et al.* (2012) evaluated the effects of school feeding on the nutritional status of schoolchildren in Osun State, Nigeria. Stratified random sampling technique was used to select 80 boys and 80 girls for the study. Descriptive analysis was conducted and the study revealed that school feeding has improved the nutritional intake and status of schoolchildren in the study area. It was therefore suggested that the continuation of the programme is capable of solving the problem of malnutrition among children.

Yunusa *et al*. (2012) studied school feeding programme as a vehicle for nourishment of pupils in Nigeria. The study reviewed Home Grown School Feeding and Health Program (HGSFHP) as an innovative approach that may boost nutritional status in the public primary schools in Nigeria and their levels of implementation by stake holders. It was however discovered that malnutrition disorders affect more than 42% of school children in Nigeria and are responsible for 49% absenteeism of primary school age children. The study therefore recommended to the Federal Government that the program should be a national policy in order to boost the literacy and health/nutrition status in the country.

2.2.6.3 *Influence of school feeding on socio-economic status*

Sodipo *et al*. (2017) carried out a study to assess the influence of socio-economic status on intake of lunch in school age children from ten public primary schools in Ondo Town. A cross- sectional survey was conducted among 150 primary school children aged 6-12yeras old. Descriptive statistics was employed for the study. Interview and structured questionnaire containing questions on socio-economic and dietary pattern was instrument used. The study revealed that the lunch eaten by the children was mostly bought from the school vendors and that the quantity of food taken by the children were inadequate to sustain them in the school

because of little amount of money given to them by their parents. It was discovered also that the quality and quantity of food consumed by the pupil is not adequate to help in growth and development. The study therefore recommended that, the government should give a feeding guideline to the schools; and the food vendors should be given nutritional education in form of workshops, to enhance the quality of school meal they serve the students, which can in turn be beneficial in improving the nutritional status and academic performance of public school children in Ondo town and Nigeria as a whole.

2.2.7 Benefit of school feeding programme

School feeding programme is designed to overcome malnutrition disorders through regular school-feeding to improve the health, nutrition status and the education abilities of school children (Yunusa *et al*., 2012). World Food Programme (WFP 2018) reported that 16.4 million school children have benefitted from nutritious meals and snacks, and that, improvement in 65 Governments' capacities have led to improved national school feeding programmes for another 39 million children**.**

Monville-oro *et al.* (2020) in agreement with the World Bank defines school feeding programme as "targeted social safety nets that provide both educational and health benefits to the most vulnerable children, thereby increasing enrolment rates, reducing absenteeism, and improving food security at the household level." Yunusa *et al*., 2012 reported that school meals have been shown to increase the nutritional status of school-age children in a variety of ways. They have also reported various benefits of school feeding programme which include the capacity of school feeding programmes to increase gender equity in access to education, which allows for gender equity across all spheres of social and economic life.

School feeding programmes reduce the costs of sending girls to school and allow for an increased number of girls to be sent to school by their families. Furthermore, improvements in female literacy that come from increased education have been linked to declining rates of fertility, increased economic opportunities, and other markers of female empowerment (Monville-oro *et al.*, 2018).

From the foregoing review, it is clear that several authors across the globe have been able to address the issues of school feeding programme as it relates to human development, sustainable development goals, school enrolment, poverty reduction, impacts and benefits of school feeding. Few other authors have addressed the issue of school feeding as it relates to school attendance alone. However, none have been able to emphatically address the issue of school feeding programme as it affects school attendance in Chanchaga Local Government Area. It is in this light, that the research is deemed to contribute to knowledge by assessing the National feeding programme on school attendance in Chanchaga Local Government Area of Niger State.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Research Design

This research employed a descriptive survey research design to examine the effects of school feeding programme in Chanchaga LGA. The rationale for the descriptive survey research design is that, it is used in preliminary and exploratory studies to allow researchers gather information, summarize, present and interpret for the purpose of clarification (Orodho, 2002). The research methodology adopted for the study is summarised in Table 3.1.

Table 3.1: Summary of Research Methodology

Objective	Data Required	Data collection instrument	Data analysis method	Data presentation method
Characteristics of school feeding programme across the wards in the Local Government Area.	Location of benefitting SFP and GPS schools; student capacity of the benefitting school; date of SFP commencement; number of cooks employed for SFP in the LG; type and volume of food cooked; and remuneration	Questionnaire	Descriptive Analysis	Tables, Plates Maps and Charts
Level of compliance of the State Social Investment Programme with the National school feeding guideline.	Time of taking meal; quantity of meal; quality of meal, where raw food are sourced	Questionnaire and Observation	Descriptive Analysis	Tables, Maps and Plates
Pattern of pupils' enrolment and attendance before and after commencement of school feeding programme;	Enrolment 5years before the commencement of SFP; enrolment 5years after the commencement of the programme; Pupils' attendance 5 years before and after the commencement of SFP	Questionnaire	Inferential Analysis (T-Test)	Tables, and Graphs
Pupils' daily feeding pattern	Meal intake before attending school; meal in school; number of meals per day; money to school	Assessment Form	Descriptive Analysis	Tables, and Charts
Constraints to the school feeding programme	Constraints	Questionnaire	Descriptive Analysis	Tables and Graphs

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Source: Researcher, 2021.

3.2 Types and Sources of Data

Data required in response to the research questions for this study were derived from primary and secondary data sources. The primary data included all unprocessed (raw) data while secondary data included all processed data collected in the course of this study.

3.2.1 Primary data required and sources

i. Number of primary schools in all the wards in the LGA; number of public primary schools benefitting from the National school feeding programme; and, number of eligible pupils benefitting from the school feeding programme in the wards; sourced from Chanchaga Local Government Secretariat.

ii. Number of cooks employed for the feeding programme in the schools; volume of food consumed per week in each of the public schools, type and quality of food provided for the eligible pupils; and, number of pupils fed daily by the school feeding programme; sourced from National Social Investment Programme, Niger State.

iii. Number of children (male and female) attending school before the National school feeding programme; number of children (male and female) attending school after the National school feeding programme; and, number of classrooms in the public primary schools across the wards; sourced from the respective public primary schools in Chanchaga Local Government Area.

iv. Challenges and constraints of the National School Feeding Programme

3.2.2 Secondary data required and sources

The secondary data sourced include:

i. Administrative boundaries of the wards that make up Chanchaga LG, sourced from Chanchaga Local Government Secretariat; ii. The population of the LGA by wards, sourced from National Population

Commission (2006 census) and projected to 2020 for the current population;

v. The national home grown school feeding guideline, sourced from National Social Investment Programme, Niger State.

iii. Number of pupils enrolled in schools before and after the commencement of the home grown school feeding programme, sourced from Planning, Research and

Statistics Unit under the Office of Education Secretary, Chanchaga Local Government Secretariat.

3.3 Instrument for Data Collection

The instruments used for data collection for this study include; structured questionnaire, assessment form, Global Positioning System (GPS), camera, direct observation and checklist.

3.3.1 Questionnaire

Three sets of well-structured open and closed ended questionnaires were developed for this study. One of the questionnaires was developed for head teachers of the selected benefiting schools; the second set of the questionnaire was for the pupils; while the third set was developed for the State Social Investment Programme agents. The questionnaire meant for the schools was developed in three sections. The first section of the questionnaire was used

to generate information on the characteristics of the schools (name, number of classrooms, and number of students); while the second section was used to address the issue of food distribution and feeding pattern in each of the selected benefitting schools across the LGA wards; and the third section was used to address the issue of school enrolment and attendance before and after the commencement of the school feeding programme. The questionnaires were administered to the selected schools and the agency in-charge of the school feeding programme.

3.3.2 Global positioning system

The global positioning system was used to acquire the geographical coordinates of the respective schools in the LGA, in order to aid in the spatial description of the benefitting schools across the LGA.

3.3.3 Assessment form

The assessment form was used for pupils in primary 1 -3 only because pupils in these classes are the eligible beneficiaries of the school feeding programme. The inputs on the form were used to assess the pupils' daily feeding pattern as it corroborates the link between school feeding programme, enrolment and school attendance**.**

3.3.4 Interview

One-on-one interview was conducted with the Programme Manager of Niger State, National Home Grown School Feeding Programme, the Cooks and the Head Teachers of the National SFP benefitting schools, to elicit their perception of the programme.

3.3.5 Camera

On-site photographs were taken from the schools during the time of serving the food to the pupils and pictures of the farm produce and other food items supplied to the Local Government for SFP were also captured using digital camera.

3.4 Study Population

Chanchaga LGA has a total of 34 pubic primary schools benefitting from the National school feeding programme. The thirty four (34) schools are distributed across nine (9) geopolitical wards in the Local Government Area (Appendix A). Hence, one school was selected from each of the nine geo-political wards for assessment (Figure 3.1).

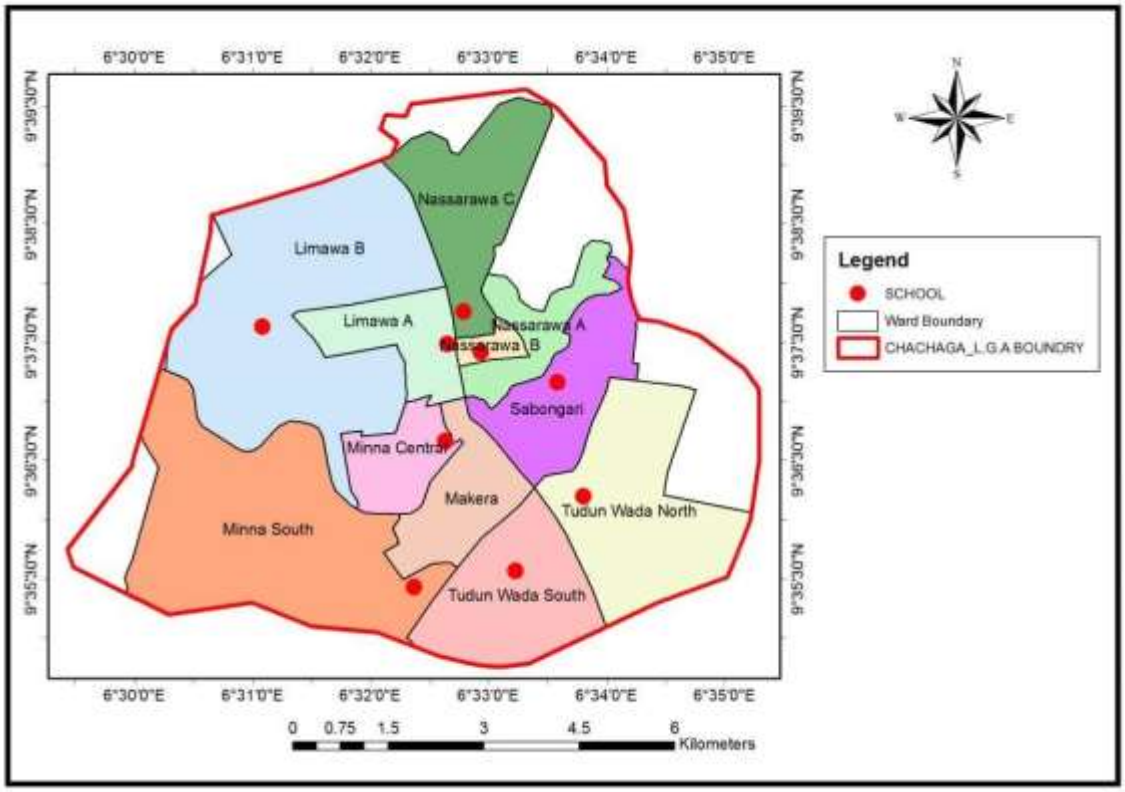

Figure 3.1: Ward Map Showing Geographical Location of Schools
Source: Researcher, 2021.

Therefore, the study population for this study is the total number of pupils enrolled in classes 1-3 in the nine selected public primary schools in Chanchaga Local Government Area of Niger State. The nine selected schools and their respective study population are presented in Tables 3.2 and 3.3.

Table 3.2: Schools Benefiting from the School Feeding Programme in the Wards

S/N	Name of Schools	Geographical Coordinates of the Schools	Geopolitical Wards where Schools are Located
1	Aliyu Muazu Sarkin Yaki Primary School	$9^0$37’45.25”N $6^0$32’47.34”E	Nasarawa C
2	Barikin Sale Primary School	$9^0$35’25.5”N $6^0$32’22.1”E	Minna South
3	IBB Primary School	$9^0$37’22.4”N $6^0$33’04.0”E	Nasarawa B
4	Kuyanbana Primary School	$9^0$36’39.0”N $6^0$32’38.0”E	Minna Central
5	Kwasau Primary School	$9^0$37’37.6”N $6^0$31’05.0”E	Limawa B
6	UBE Angwan Kaje Primary School	$9^0$37’15.7”N $6^0$33’27.5”E	Sabon Gari
7	UBE Tunga North Primary School	$9^0$36’11.6”N $6^0$33’48.2”E	Tudun Wada North
8	UBE Waziri Primary School	$9^0$37’29.0”N $6^0$32’39.0”E	Limawa A
9	Umaru Audi Memorial Primary School	$9^0$35’34.40”N $6^0$33’44.64”E	Tudun Wada South

Source: Researcher, 2021.

Table 3.3: Breakdown of Pupils’ Population per Class

S/n	Name of School	Population of Pupils Per Class			Total Study Population in Schools
		1	2	3	
1	Aliyu Muazu Sarkin Yaki Primary School	281	289	247	817

2	Barikin Sale Primary School	563	564	548	1675
3	IBB Primary School	376	347	354	1077
4	Kuyanbana Primary School	260	261	286	807
5	Kwasau Primary School	230	274	270	774
6	UBE Angwan Kaje Primary School	368	360	360	1088
7	UBE Tunga North Primary School	245	243	282	770
8	UBE Waziri Primary School	178	174	192	544
9	Umaru Audi Memorial Primary School	192	190	284	666
	Total				8218

Source**:** Extract, Planning, Research and Statistics Unit, Office of Education Secretary, Chanchaga LG Secretariat, 2021.

3.5 Sample Size

To arrive at a representative sample size for the study, the population of students in each school was used to calculate the minimum sample size required for each school. The sample size for the schools were determined using Macorr sample size calculator at 95% confidence level and a sample error margin of five. The result of the sample size for each school is presented in Table 3.4. The sample size for each school was administered to students within classes 1-3 which forms the population of the study. The number of students sampled in each class (1-3) is a proportion of the population of the class to the total population of the three classes. The distribution of the sample size across the three classes is also presented in Table 3.4.

Table 3.4: Sample Size for Schools in Chanchaga LGA

S/n	Selected Schools	Total Sample Size per School	Sample Size for each Class		
			1	2	3
1	Aliyu Muazu Sarkin Yaki Primary School	163	56	58	49

2	Barikin Sale Primary School	169	57	57	55
3	IBB Primary School	167	58	54	55
4	Kuyanbana Primary School	146	47	47	52
5	Kwasau Primary School	138	39	50	49
6	UBE Angwan Kaje Primary School	160	54	53	53
7	UBE Tunga North Primary School	149	47	47	55
8	UBE Waziri Primary School	141	46	45	50
9	Umaru Audi Memorial Primary School	130	38	36	56

Source: Researcher, 2021.

3.6 Sampling Technique

The study adopted a multi-stage sampling technique. Stratified random sampling technique was employed in the selection of one school from each of the nine (9) geo-political wards where the schools are located (Appendix A). The pupils were selected randomly after stratifying them into classes 1-3 in order to ensure full representation. The total number of questionnaires administered to pupils in the benefitting classes (1-3) in all the nine (9) selected schools was 1,363. Table 3.5 shows the sampling technique adopted for the questionnaire administration.

Table 3.5: Sampling Technique used for Questionnaire Administration

S/n	Geo-political ward	Selected Schools	Number of Questionnaire administered to schools (classes 1-3)
1	Limawa A	UBE Waziri Primary School	141
2	Limawa B	Kwasau Primary School	138
3	Minna Central	Kuyanbana Primary School	146
4	Minna South	Barikin Sale Primary School	169

5	Nasarawa B	IBB Primary School	167
6	Nasarawa C	Aliyu Muazu Sarkin Yaki Primary School	163
7	Sabon Geri	UBE Angwan Kaje Primary School	160
8	Tudun Wada North	UBE Tunga North Primary School	149
9	Tudun Wada South	Umaru Audi Memorial Primary School	130
	Total		1,363

Source: Researcher, 2021.

3.7 Data Analysis Method and Presentation

The data gathered for this study were subjected to inferential and descriptive statistics. The descriptive statistical tools employed comprise frequency, percentage, mean, minimum, maximum and standard deviation. The assessment of the pupils' pattern of enrolment and attendance before and after the commencement of the programme was subjected to T-test analysis, while data collected for pupils' daily feeding and constraints to the feeding programme were analysed using frequency and percentage.

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Characteristics of School Feeding Programme in Chanchaga Local Government Area

The characteristics of school feeding programme across the geopolitical wards in Chanchaga Local Government Area (LGA) was assessed. The characteristics assessed include number of benefiting schools, number of pupils benefitting from the SFP, type and quantity of food served and service frequency.

4.1.1 Schools benefiting from school feeding programme

The inventory of schools benefitting from the school feeding programme in each of the geo-political wards in Chanchaga LGA is presented in Table 4.1. The result revealed that 26% of the schools benefitting from the SFP were within Minna South, 15% in Minna Central, while Limawa A and Tudun Wada North had 12% of the schools benefitting from the SFP respectively. This shows that about 65% of the schools benefitting from the SFP are within four of the eleven wards in the LGA. Table 4.1 also shows that no school benefitting from SFP is identified within Makera and Nasarawa A. The names of the schools benefitting from the programme are presented in Appendix A.

Table 4.1: Schools Benefiting from School Feeding Programme

Wards	No of Schools	Percent
Limawa A	3	9
Limawa B	4	12
Makera	0	0
Minna Central	5	15
Minna South	9	26
Nassarawa A	0	0
Nassarawa B	1	3
Nassarawa C	2	6
Sabon Gari	3	9
T/Wada North	4	12
T/Wada South	3	9
Total	34	100

4.1.2 Pupils benefiting from school feeding programme

The number of pupils benefiting from SFP in the selected public primary schools in Chanchaga LGA is presented in Table 4.2. The result shows that a total of 16,870 students are currently benefitting from the school feeding programme in the nine selected schools. Table 4.2 shows that 20% of the pupils benefitting from the SFP in the selected schools were from Barikin Sale primary school, 13% from UBE Angwan Kaje, and 12% from IBB primary school. UBE Waziri primary school had the least proportion of students benefitting from SFP, followed by Umaru Audi, UBE Tunga, Aliyu Muazu, and Kwasau primary school with 9% each. This shows that the number of pupils benefitting from SFP in Chanchaga LGA varies both by gender and ward.

Table 4.2: Number of Pupils Benefitting from SFP in the Selected Schools

Name of School	Gender		Total Number of Pupils
	Male	Female	
Aliyu Muazu Sarkin Yaki Primary School	756	778	1534 (9)
Barkin Sale Primary School	1723	1694	3417 (20)
IBB Primary School	1069	1036	2105 (12)
Kuyanbana Primary School	901	838	1739 (10)
Kwasau Primary School	525	1069	1594 (9)
UBE Angwan Kaje Primary School	1115	1119	2234 (13)
UBE Tunga North Primary School	705	882	1587 (9)
UBE Waziri Primary School	535	560	1095 (6)

Umaru Audi Memorial Primary School	754	811	1565 (9)
Total	8,083 (48%)	8,787 (52%)	16,870 (100%)

4.1.3 Types and quantity of food served

The characteristics of food served to pupils under the SFP programme was observed across the selected schools and the result is presented in Table 4.3. The result shows that four classes of food are prepared and administered to the students from Monday to Friday. Jollof rice and beef is served twice (Monday and Wednesday). Yam porridge and egg, beans porridge and bread, and bread and Soya Sauce are served once on Tuesday, Thursday, and Friday respectively. The study shows that the food served on daily basis had elements of four classes of food which include carbohydrate, protein, minerals, fat and oil. Hence, the food served can be adjudged to be rich for child development. A typical example of food served on Friday is depicted in Plate I.

Table 4.3: Type and Quantity of Food Served with Service Frequency

Food type	Class of Food	Frequency per week	Qty. of food served
Jollof Rice & beef	Carbohydrate/protein/vitamin/ fat &oil	Twice	Two serving spoons
Yam Porridge and Egg	Carbohydrate/protein/vitamin/ fat &oil	Once	One serving spoon
Beans Porridge and bread	Carbohydrate/protein/vitamin/ fat &oil	Once	One scoop

Bread and Soya Cheese sauce	Carbohydrate/protein/vitamin/ fat &oil	Once	One soya cheese with sauce

Plate I: Soya Sauce Cheese & Bread Served on Friday in Kwasau Primary School

4.2 The Level of Compliance with National Home Grown School Feeding Guideline This aspect of the study is focused on the level of compliance of the State with the stipulated National home grown feeding guideline. The guideline points at establishment of multi-sectorial State steering committee and monitoring team to oversee and monitor the implementation and compliance with the programme, recruitment of cooks (vendors) from within communities where schools are located, staple food supply locally sourced from smallholder farmers within the region and State should handle bulk procurement of protein/carbohydrate content (beef, egg and bread) for cooks.

4.2.1 State multi-sectorial steering committee/ monitoring team

The State has no separate feeding guideline from the national and in order to ensure compliance with the national home grown school feeding guideline, Niger State Government constituted a multi-sectorial team comprising the focal person, Hon. Commissioner for Agriculture, Hon. Commissioner for Education, Rep. Niger State Universal Basic Education Board (NSUBEB), State Nutritionist, National Bureau of Statistics (NBS), Rep. Education Secretaries, School-Based Management Committee (SBMC), National Orientation Agency (NOA), Directorate for State Security (DSS), Association of Head Teachers, Programme Manager, Community Leaders, Religious Leaders and volunteers. The multi-sectorial team is to evaluate the performance of the school feeding programme in the state by ensuring that all eligible pupils are properly fed.

4.2.2 Recruitment of cooks for the school feeding programme in Chanchaga local government area

The analysis on the number of cooks recruited for the school feeding programme in Chanchaga LGA is attached as Appendix B. The analysis shows that there are five hundred and forty (540) cooks who are basically recruited directly by the Government for the programme. All the five hundred and forty cooks employed for the programme are women who reside within the communities where the schools benefitting from the feeding programme are located. The cooks are saddled with the responsibility of purchasing the required condiments for cooking based on the approved menu by the State (Table 4.4).

Table 4.4: Approved Monthly Condiment Purchase and Stipend for Cook

Ingredient / Condiment	Quantity	Cost (₦)
Seasoning cube	2pkt	1000.00

Palm/ vegetable oil	4 litres	3,200.00
Salt	1pkt	300.00
Onion	-	800.00
Pepper & Tomatoes	-	1,000.00
Firewood	-	1,600.00
Water	-	800.00
Vegetable	-	300.00
Transportation	-	1000.00
Stipend for cook		20,000.00
Total		30,000.00

The Cooks are to cook as well as serve the food to the pupils during lunch break at 9:45am every school day, Monday to Friday. The number of cooks assigned to SFP benefitting schools varies depending on the eligible students' population in the schools (Table 4.5). The food served each eligible pupil in the Chanchaga LG is worth seventy naira (₦70) which is the same worth of food served every eligible pupil for the national home grown school feeding programme across all the public schools in the country.

Table 4.5: Cooks and Pupils Served in Selected Public Primary Schools in the LG

Name of School	Number of Cooks	Number of pupils served every school day
Aliyu Muazu Sarkin Yaki Primary School	24	817
Barkin Sale Primary School	41	1675
IBB Primary School	36	1077
Kuyanbana Primary School	28	807
Kwasau Primary School	30	774
UBE Angwan Kaje Primary School	38	1088
UBE Tunga North Primary School	27	770
UBE Waziri Primary School	22	544
Umaru Audi Memorial Primary School	26	666

The positive impact of the school feeding programme on the community cannot be overemphasised, one of which is women empowerment. Women are employed as cooks for the school feeding programme and this has made them financially relevant to their respective families. Amongst the things the cooks are happy they have learnt to do, is, bank transactions because all the payments they receive for purchase of condiments and stipends are done through approved banks. They are also happy because they can contribute financially, even though little, to their respective families as a result of involvement in the school feeding programme. Plates II and III shows the pictures of cooks assigned to Barkin

Sale and Kwasau primary schools in Chanchaga Local Government.

Plate II: Cooks Employed For School Feeding Programme in Barkin Sale Primary School

Plate III: Cooks Employed For School Feeding Programme in Kwasau Primary School

4.2.3 Location of food source for school feeding programme

According to the State Programme Manager, National Home Grown School feeding**,** food supplied for the school feeding programme in Niger State is sourced locally within the Local Government Areas of the State. Rice, which is a major food in the menu, is sourced from Wushishi, Agaie, Edati, Gbako, Katcha, Lapai, Lavun and Gurara Local Government Areas (Figure 4.1).

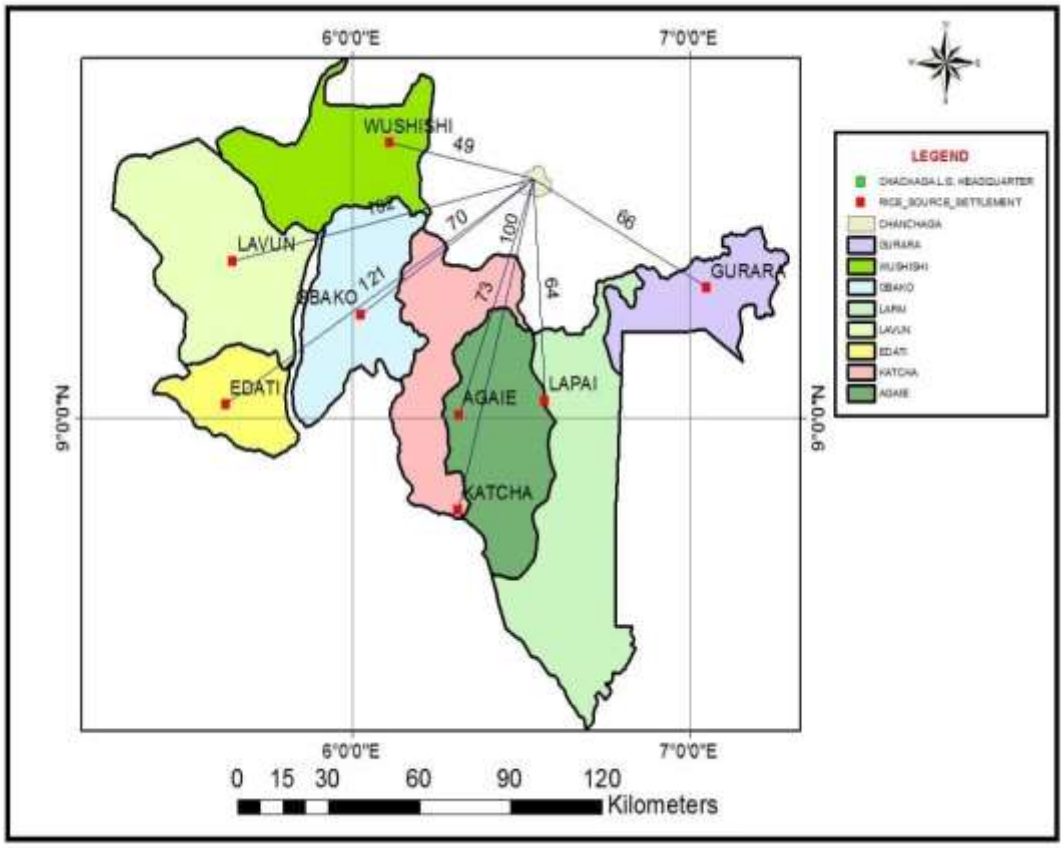

Figure 4.1: Areas Where Rice Grains Are Sourced For School Feeding Programme

These areas have network of smallholder rice farmers and millers who produce, mill and supply all the bags of rice grains needed for the home grown school feeding in the State (Plate IV).The bags of rice are de-stoned but unpolished in order to retain nutrient benefits before supplying them to Chanchaga Local Government for onward distribution to the schools that are benefitting from the national school feeding programme. A measure (*mudu*) of rice is sold ₦650 from the farm.

Plate IV: Rice Produced and Supplied For School Feeding Programme

In relation to the distance covered from the study area, Figure 4.1 shows that the estimated shortest average distance covered while transporting rice from the various locations is 49km (Wushishi LGA) while the estimated longest average distance covered is 121km (Edati LGA). Rice suppliers from Lapai (64km) and Gurara (66km) travel almost the same estimated distance to the study area to supply rice while those from Gbako and Agaie travel 70km and 73km to supply their rice. Likewise, suppliers from Katcha and Lavun cover an estimated average distance of 100km and 102km to the study area. The foregoing analysis shows that the socioeconomic effects of the SFP goes beyond the immediate location of the schools, but also contribute to the inter-community interaction of the communities.

In the same vein, network of smallholder yam farmers in the State produce and supply all the yam tubers used for the home grown school feeding programme in the State. The yam tubers are locally sourced from Sarkin Pawa, Kuta, Gwada, Fuka, Dandaudu, Beni, KafinKoro, Lambata, Paiko, Maikunkele and Garatu areas in Niger East Senatorial District of the State (Figure 4.2).

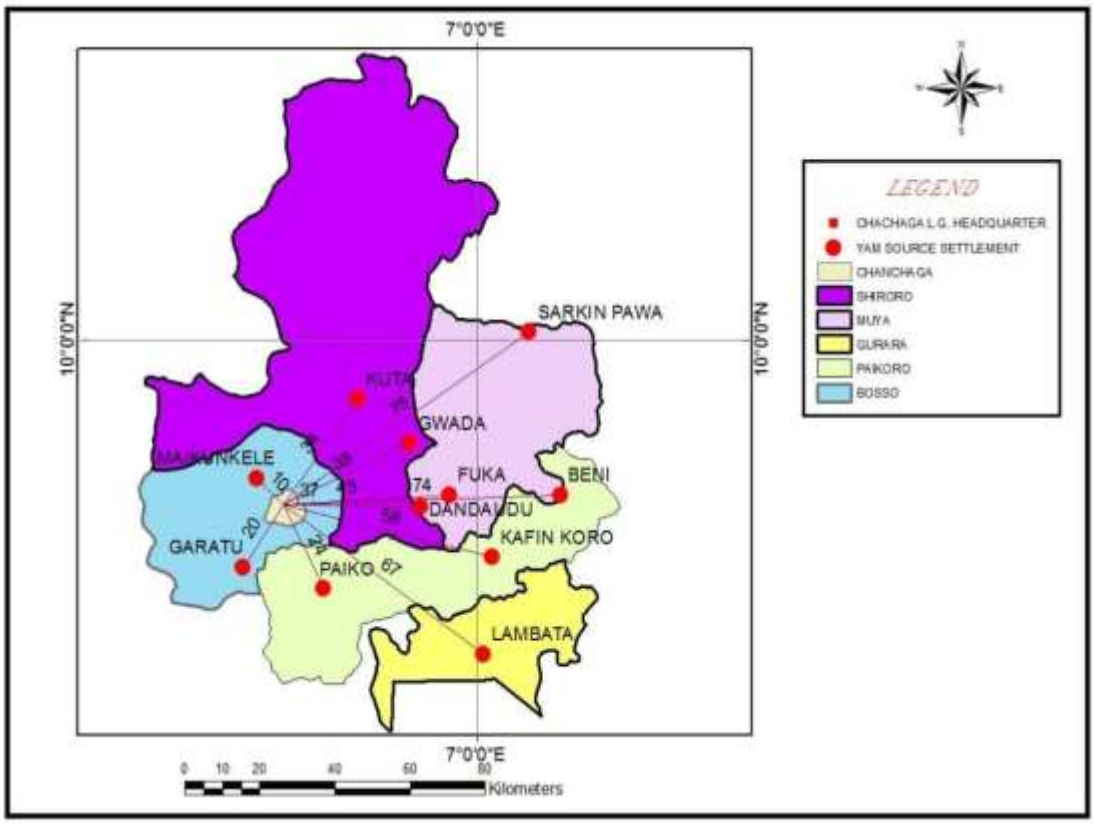

Figure 4.2: Settlements Where Yam Tubers for School Feeding Programme Are Produced

The tubers of yams farmed in the areas are therefore transported from the different farm locations to Chanchaga Local Government Secretariat where they are distributed to the benefiting schools. Plate V shows yam tubers supplied for the school feeding programme in the study area.

Plate V: Yam Tubers Produced For School Feeding Programme

The distance covered from the study area to the various locations where these yam tubers are sourced for the school feeding programme is indicated in Figure 4.2. From the map, Maikunkele is the nearest settlement with estimated distance of 10km from the study area while Sarkin Pawa settlement in Munya Local Government Area is an average of 78km from the study area, making it the farthest estimated distance covered. Garartu and Paiko settlements cover almost the same distance (20km and 24km) from the study area while the estimated distance covered transporting yam tubers from Kuta, Dandaudu and Gwada is 34km, 37km and 38km respectively. Also, Fuka, KafinKoro and Lambata settlements are settlements where yam tubers are sourced in large quantity for the purpose of school feeding programme and these settlements cover estimated distance of 45km, 58km and 67km respectively from the study area.

Like other staple food, Beans supplied to cooks for school feeding programme are produced in large quantity by beans farmers association in Mokwa, Kontagora, Magama, Mariga, Mashegu and Rijau Local Government Areas of Niger State (Figure 4.3).

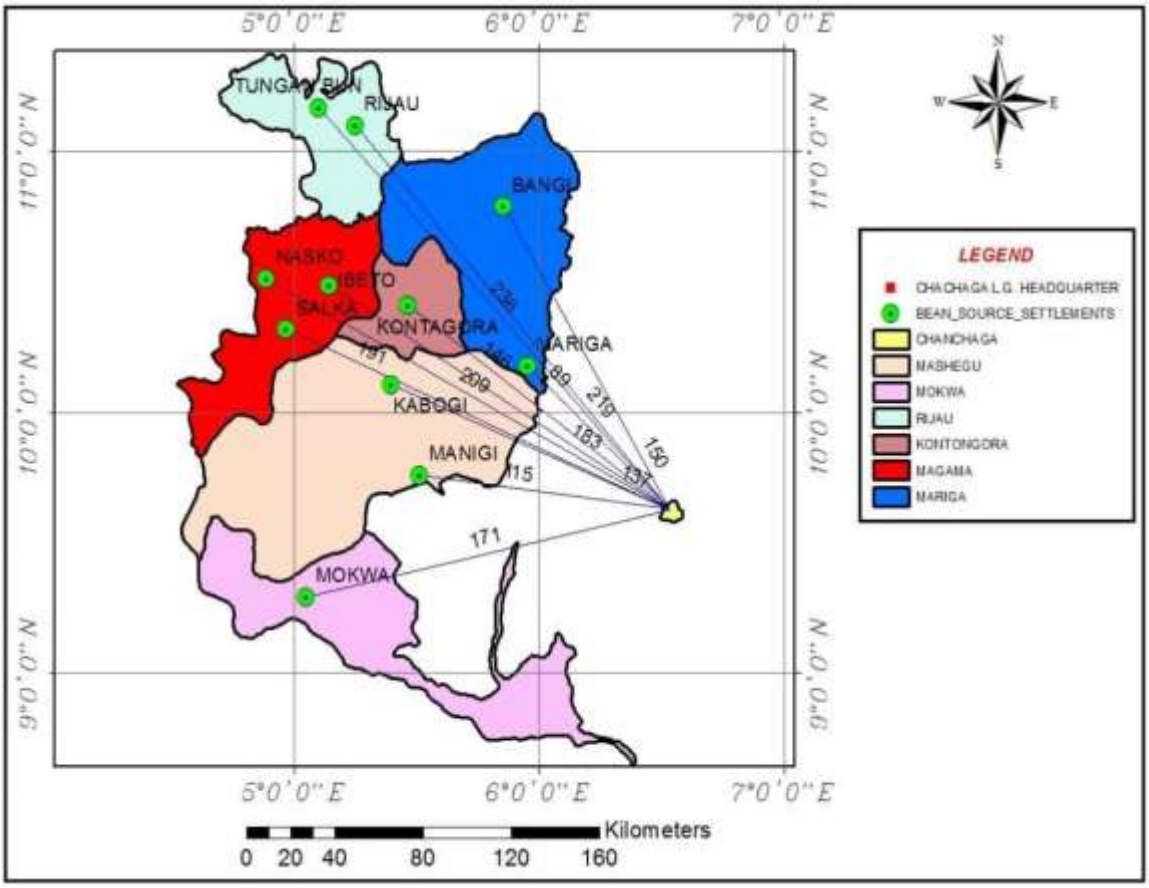

Figure 4.3: Settlements Where Beans for School Feeding Programme Are Produced

The farmers put the beans in stitched bags to avoid pouring while on transit to the LG Secretariat for further distribution to the benefiting schools. A measure (*mudu*) of beans from the farmer goes for ₦850. Plates VI shows sealed bags of beans ready to be offloaded from distribution van in Chanchaga Local Government Secretariat.

Plate VI: Bags of Beans Supplied to the LG Secretariat for School Feeding Programme

From Figure 4.3, farmers in the locations where beans are sourced in large quantity travel a longer distance to supply their produce as compared with those supplying rice and yam tubers. Tungan Bun in Rijau Local Government Area is the farthest location. The beans supplier will have to travel an average estimated distance of 236km to the collection centre. The distance covered from all the beans producing settlements – Tunga Bun, Rijau, Bangi, Kontagora, Kabogi, Manigi, Mokwa, Nasko, Ibeto and Salka are above 100km except Mariga, which is 89km to the study area.

In the same vein, soya beans used for the production of cheese in the school feeding menu is produced by network of smallholder farmers in Kagara, Mariga, Gwada, Paiko and Kataeregi settlements (Figure 4.4).

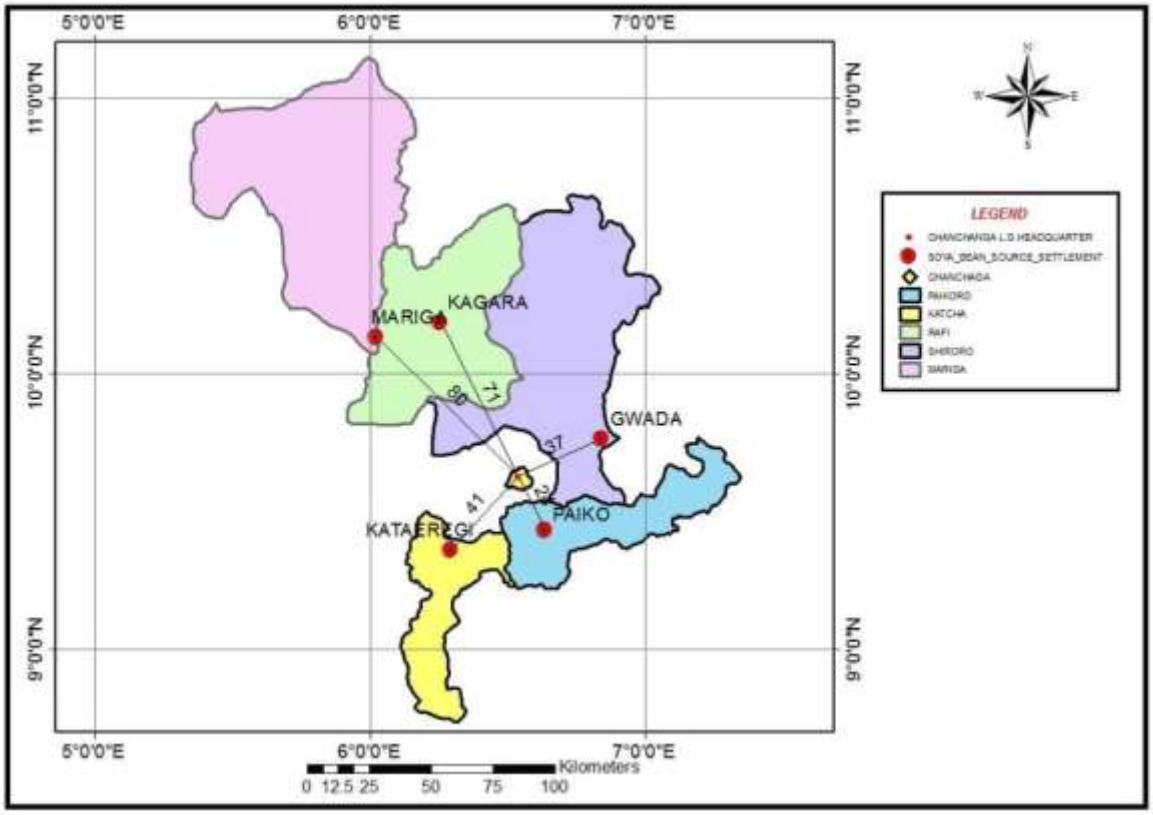

Figure 4.4: Settlements Where Soya Beans are Produced for School Feeding Programme

The soya beans is processed and packaged into fried cheese (*wara*) by cheese makers for onward delivery to all the public primary schools benefiting from the school feeding programme. Plate VII shows the picture of cheese (*wara*) made from soya beans for the school feeding programme in Chanchaga Local Government.

Plate VII: Cheese Made From Soya Beans for SFP in Chanchaga Local Government Area

From Figure 4.4, locations where soya beans are sourced are closer to Chanchaga Local Government Headquarters. Mariga which is the farthest location covers an average estimated distance of 89km from the study area while Paiko covers an average estimated distance of 24km making it the shortest distance covered in transporting soya beans to Chanchaga LGA. Other locations where soya beans are sourced include Kagara and average distance covered is 71km, Kataeregi covers an average distance of 41km and Gwada covers an average distance of 37km to the study area.

4.2.4 Procurement of protein and carbohydrate content for cooks

In compliance with the National school feeding guideline, the State Government procures other protein and carbohydrate contents from suppliers registered with the State. Poultry eggs (protein) are locally sourced from network of registered poultry farmers within the community for the purpose of school feeding programme. According to the Programme

Manager, every week, the suppliers supply over eighteen thousand (18,000) crates of fresh eggs from the poultry to be distributed among the schools benefiting from the feeding programme in Chanchaga LG. Plate VIII and Plate IX shows pictures of eggs received in a warehouse, sorted and ready for distribution to the cooks.

Plate VIII: Eggs Supplied for School Feeding Programme in Chanchaga LGA

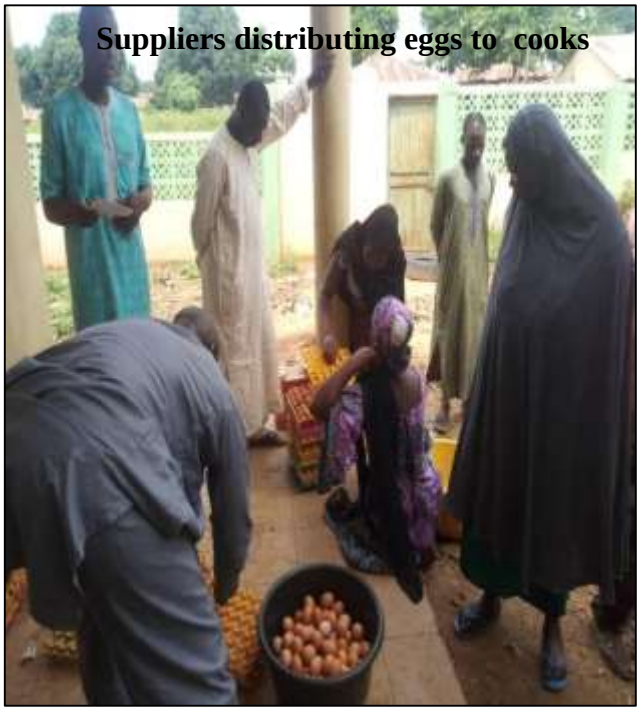

Plate IX: Distribution of Eggs to Cooks in Chanchaga LGA

Furthermore, beef production process to make up the protein content in the menu is handled by Butchers Association of Niger State. The cooks have an allotment of 70-100 pupils. In respect to that, pieces of meat are counted and tied in nylon bags and the number of pupils written on each nylon bag. The process of packaging beef to be supplied to cooks for the purpose of school feeding in Chanchaga LG is shown in Plate X.

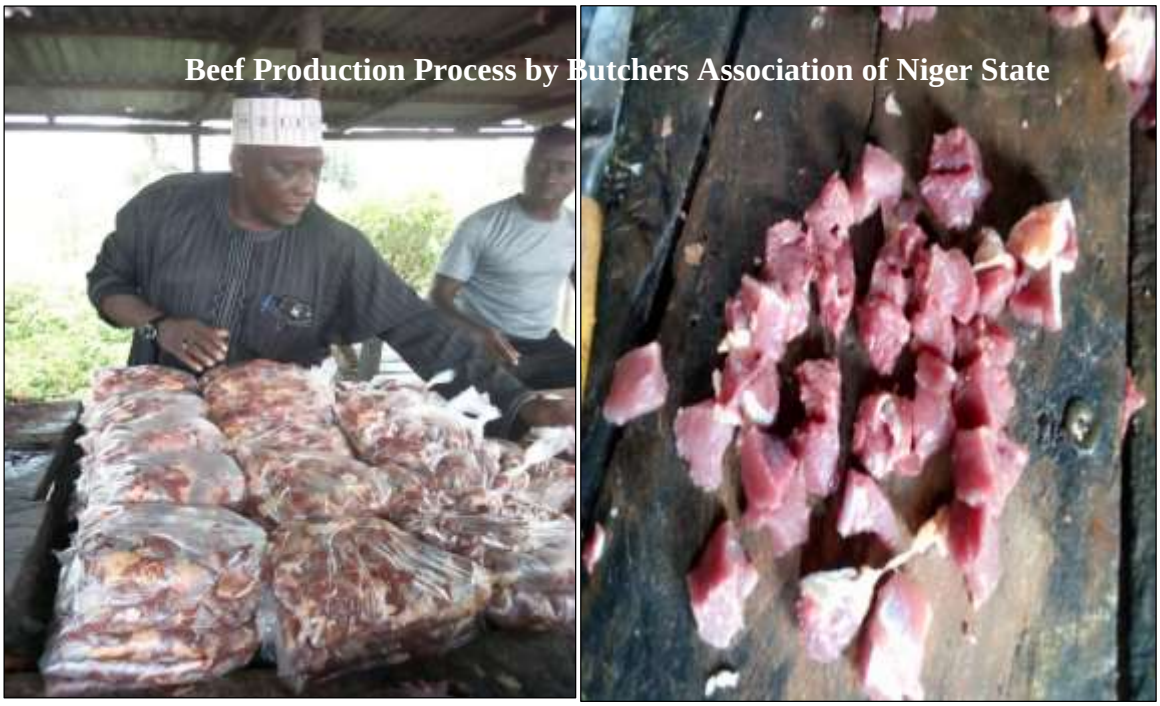

Plate X: Beef Supplied for School Feeding Programme in Chanchaga LGA

In the same vein, bread supplied to make up the carbohydrate content in the menu is handled by master bakers association of Niger State. The bakers have their registered members and bread baked for the entire State is distributed among them. The bakers are supervised by health officials from the State to ensure that bread produced for school feeding programme are saccharin and bromide free. Bread is distributed once weekly and the cost of a loaf of

bread is ₦200 to be shared amongst eight (8) pupils. Plate XI gives a view of where and how these loafs of bread are delivered and cooks taking delivery of the supply for schools that are benefiting from the feeding programme in Chanchaga Local Government.

Plate XI**:** Cooks Taking Delivery of Bread Supplied For SFP in Chanchaga LG

4.3 Pattern of Pupils' Enrolment and Attendance in Chanchaga Local Government Area

This section of the study focused on the pupils' enrolment and attendance before and after the commencement of school feeding in the public primary schools in Chanchaga Local Government Area (LGA). The public primary schools under studied were Aliyu Muazu Sarkin Yaki, Barkin Sale, IBB, Kuyanbana, Kwasau, UBE Angwan Kaje, UBE Tunga north, UBE Waziri and Umaru Audi memorial primary school. There cannot be attendance without enrolment therefore; enrolment and attendance records of pupils between 20122016 and 2017-2021 were used to assess the pattern of student enrolment and attendance before and after the school feeding programme respectively.

4.3.1 Pattern of pupils' school enrolment in Chanchaga local government area

This section of the study focused on the pupils' enrolment before (2012–2016) and after (2017–2021) the commencement of feeding programme in the public primary schools in Chanchaga LGA.

4.3.1.1 *Pattern of pupils enrolment before the school feeding programme*

The analysis of the pupils enrolled per year, five years before the commencement of school feeding programme in the nine selected public primary school in Chanchaga LGA is explicitly shown in Table 4.6. The result indicated that in year 2012 and 2013, over 50% of the pupils enrolled across the selected public schools were females while the males enrolled were in the neighbourhood of (48-49) %. However, in subsequent years –2014-2016, there was a balance in the enrolment pattern of pupils across the selected schools in the LGA. The enrolment for both male and female pupils was 50% in the consecutive years.

Table 4.6: Pattern of Pupils Enrolment before the School Feeding Programme

	Gender		
Year of enrolment	Male	Female	Total
2012	7835 (49%)	8197 (51%)	16032 (100%)
2013	8763 (48%)	9424 (52%)	18187 (100%)
2014	8443 (50%)	8318 (50%)	16761 (100%)
2015	8088 (50%)	8141 (50%)	16229 (100%)
2016	9597 (50%)	9733 (50%)	19330 (100%)

4.3.1.2 *Pattern of pupils enrolment after the school feeding programme*

The analysis of pupils enrolled per year, five years after the commencement of school feeding programme in the nine selected public primary schools in Chanchaga LGA showed that in years 2017 and 2019, there were equal (50%) enrolment of male and female pupils in the

schools. See Table 4.7. However, in years 2018 and 2020, more (51% and 52%) female pupils were enrolled into schools while majority (53%) of the enrolled pupils in year 2021 were males as indicated in the Table 4.7.

Table 4.7: Pattern of Pupils Enrolment after the School Feeding Programme Gender

Year of enrolment	Male	Female	Total
2017	7358 (50%)	7254 (50%)	14612 (100%)
2018	7181 (49%)	7594 (51%)	14775 (100%)
2019	8073 (50%)	8067 (50%)	16140 (100%)
2020	7502 (48%)	7981 (52%)	15483 (100%)
2021	8083 (53%)	7281 (47%)	15364 (100%)

4.3.1.3 *Changes in enrolment pattern before the commencement of school feeding programme*

The analysis on the changes in enrolment pattern of pupils in the 9 selected schools across Chanchaga LGA, over a period of five years (2012-2016), before the commencement of school feeding programme is shown in Figure 4.5. The result showed that there were conspicuous changes in the enrolment pattern of pupils across the LGA over time. From Figure 4.5, in 2013, there was an increase (13.4%) in the pupils' enrolment across the schools. However, in 2014, there was a drastic decline (-7.8%) in the number of pupils enrolled into the public schools that year. Subsequently, in 2015, there was a gradual change in the enrolment pattern of pupils such that there was an increase (-3.2%) in the number of pupils enrolled into schools. Thereafter, in 2016, there was a conspicuous significant change in the enrolment pattern of pupils into the schools such that the enrolment increased by 19.1% across the schools. By implication, the increase in pupils' enrolment across the Local Government Area in 2016 was triggered by the school census conducted in preparation for

the reintroduction of home grown school feeding programme anchored by the Federal Government.

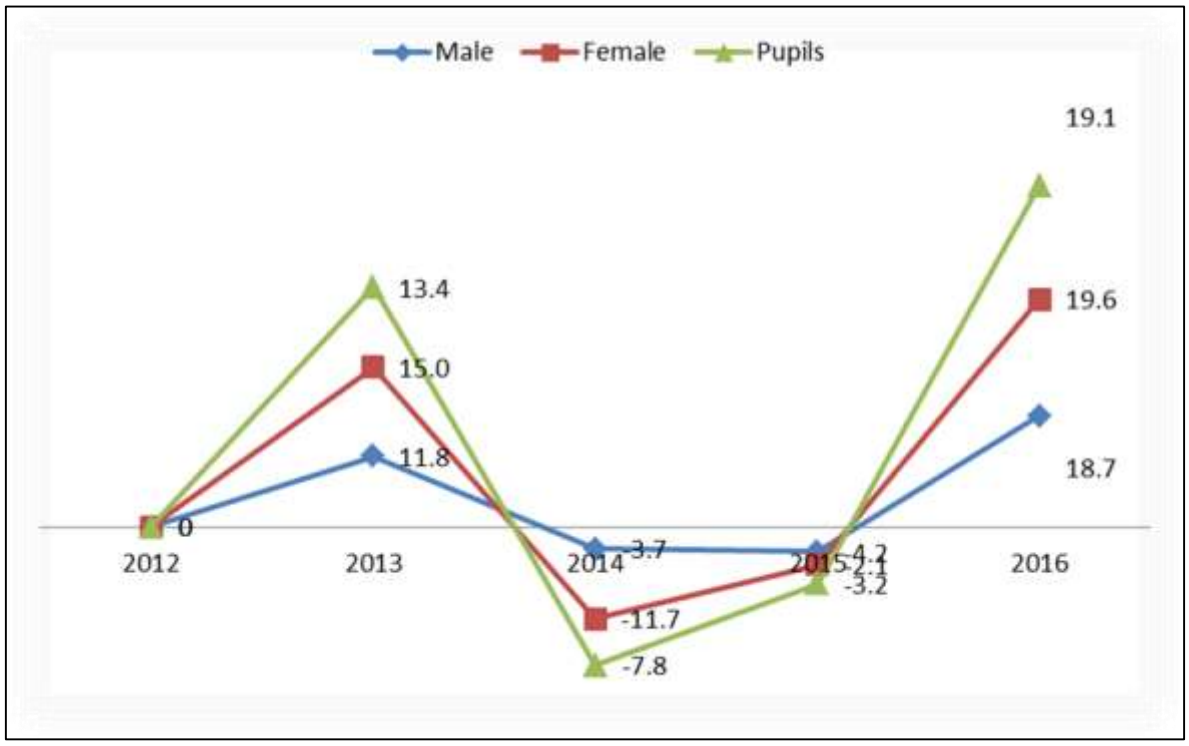

Figure 4.5: Changes in Enrolment Pattern before School Feeding Programme

4.3.1.4 *Changes in enrolment pattern after the commencement of school feeding programme*

The analysis on the changes in enrolment pattern of pupils in the 9 selected schools across Chanchaga LGA, over a period of five years (2017-2021), after the commencement of school feeding programme is shown in Figure 4.6. The change in the pattern of pupils' enrolment in 2018 was insignificant (1.1%) as compared to the significant change in pattern of enrolment in 2019 (9.2%) increased enrolment. This increase in enrolment was perceived to have been triggered by the public awareness of the programme implementation.

However, in year 2020, there was a negative change (-0.4%) in the enrolment pattern across the LG which was also perceived to be as a result of the Covid'19 pandemic that affected not

only the education sector but every other developmental sector of the economy and government.

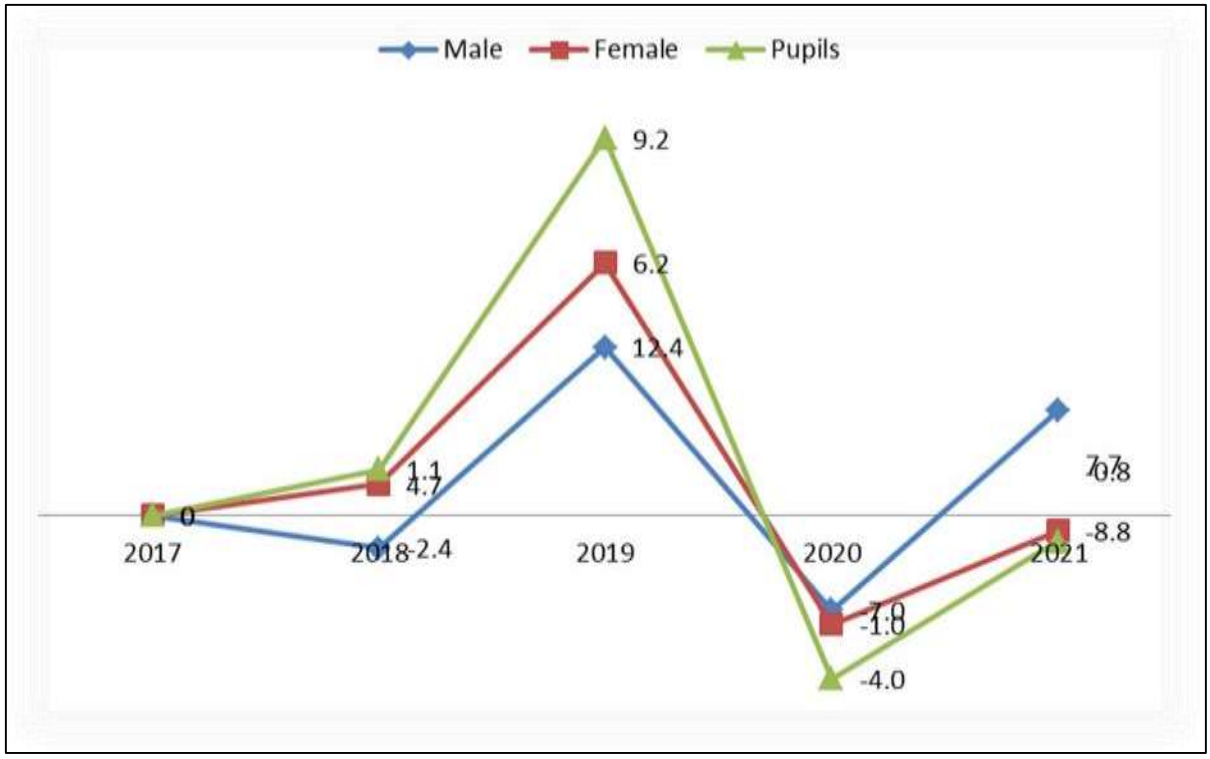

Figure 4.6: Changes in Enrolment Pattern after School Feeding Programme

4.3.1.5 *Pupils enrolment five (5) years before and after the commencement of school feeding programme*

The pattern of enrolment of female, male and pupils in public primary schools in Chanchaga LGA was assessed and the result is presented in Table 4.8. The study revealed that male student enrolment is higher before the SFP (2012-2016) than after the commencement of the SFP (2017-2021). Average annual total male pupils' enrolment before the SFP is 8,545 pupils, while male pupils' enrolment after the SFP is 7639 pupils.

This shows that there is a decrease in the enrolment of male student in the public primary school after the commencement of the school feeding programme.

Table 4.8: Male Pupils' Enrolment Before and After the School Feeding Programme

	N	Mean	Std. Deviation	Std. Error Mean
Male (Before)	5	8,545.2	685.12	306.4
Male (After)	5	7,639.4	416.23	186.14

In addition, the study further examined the difference in enrolment pattern of male student using one sample T-test. The analysis recorded a p-value of 0.035 for equal variances and 0.041 for unequal variances (Table 4.9). The p-values recorded is lower than 0.05. Therefore, there is a statistically significant difference in the pattern of male students' enrolment in the public primary schools in Chanchaga LGA.

Table 4.9: Variation in the Pattern of Male Pupils' Enrolment

		t	df	p-value (2-tailed)
Male (Before)–Male (After)	Equal variances	2.53	8	.035
	Unequal variances	2.53	6.6	.041

Similarly, the study also shows that total enrolment of female students before the SFP is higher than the total enrolment of female student after the commencement of the SFP. Table 4.10 shows that the average annual total enrolment of female student before the SFP is 8763, while average annual total enrolment of female student after the commencement of the SFP is 7635 pupils. This also indicates that there is drop in the enrolment record of female students after the commencement of the SFP.

Table 4.10: Female Enrolment Pattern Before and After the SFP in Chanchaga LGA

	N	Mean	Std. Deviation	Std. Error Mean
Female (Before)	5	8,762.6	755.49	337.87

Female (After)	5	7,635.4	380.3	170.07

Consequently, the variation in female enrolment pattern before and after the commencement of SFP in Chanchaga LGA is presented in Table 4.11. The one sample Ttest recorded a p-value of .018 and .025 for equal and unequal variances. This shows that the p-value reported for equal and unequal variances is lower than .05. Hence, this implies that there is a statistically significant variation in the pattern of female students' enrolment before and after the commencement of the SFP in Chanchaga LGA. This is similar to the pattern of male enrolment reported in the preceding section.

Table 4.11: Variation in the Pattern of Female Pupils' Enrolment

		t	df	p-value (2-tailed)
Female (Before)–Female (After)	Equal variances	2.98	8	.018
	Unequal variances	2.98	5.9	.025

Furthermore, the study also shows that average annual total enrolment of all the pupils in the selected schools before the SFP is higher than the average annual total enrolment of all the pupils after the commencement of the SFP. Table 4.12 shows that the average annual total enrolment of pupils before the SFP is 17,307.8, while average total enrolment of pupils after the commencement of the SFP is 15,274.8 pupils. Like the preceding analysis, this also indicates that there is decrease in the enrolment record of pupils after the commencement of the SFP.

Table 4.12: Pupils Enrolment Pattern Before and After the SFP in Chanchaga LGA

	N	Mean	Std. Deviation	Std. Error Mean
Total Pupils (Before)	5	17,307.8	1,410.03	630.59

Total Pupils (After)	5	15,274.8	610.12	272.85

Finally, the variation in pupils' enrolment pattern before and after the commencement of SFP in Chanchaga LGA is presented in Table 4.13. The one sample T-test recorded a pvalue of .018 for equal variance and .028 for unequal variance. This shows that the p-value reported for equal and unequal variances is lower than .05. Hence, this implies that there is a statistically significant variation in the pattern of pupil's enrolment before and after the commencement of school feeding programme in Chanchaga LGA. This also similar to the pattern of male and female enrolment reported in the preceding sections. This shows that providing food for pupils is not a critical motivator for enrolment and attendance of pupils in public schools.

Table 4.13: Variation in the Pattern of Total Pupils Enrolment

		t	df	p-value (2-tailed)
Pupils (Before)– Pupils (After)	Equal variances	2.96	8	.018
	Unequal variances	2.96	5.45	.028

4.3.2 Pattern of pupils' school attendance in Chanchaga local government area

This section of the study focused on the pupils' school attendance before (2012-2016) and after (2017-2021) the commencement of feeding programme in the public primary schools in Chanchaga LGA.

4.3.2.1 *Pattern of pupils attendance before the commencement of school feeding programme*

The analysis in Table 4.14 shows the pattern of pupils' attendance per year, five years before the commencement of school feeding programme in the public primary school in Chanchaga

LGA. The study indicated that in year 2012 and 2013, both male and female pupils had equal attendance record (50%) in the schools. Consecutively, in 2014 - 2016, attendance for male pupils dropped to 48% and 49% respectively; while that of the female pupils increased to 51% and 52% respectively.

Table 4.14: **Pattern of Pupils Attendance before the Commencement of SFP**

Year of Attendance	Gender		
	Male	Female	Total
2012	937,260 (50%)	930,600 (50%)	1,867,860 (100%)
2013	974,160 (50%)	962,820 (50%)	1,936,980 (100%)
2014	1,004,400 (48%)	1,089,720 (50%)	2,094,120 (100%)
2015	1,062,180 (49%)	1,126,080 (51%)	2,188,260 (100%)
2016	1,124,100 (48%)	1,194,480 (52%)	2,318,580 (100%)

4.3.2.2 ***Pattern of pupils attendance after the commencement of school feeding programme***

The analysis of pupils' school attendance per year, five years (2017-2021) after the commencement of school feeding programme in the nine selected public primary schools is shown in Table 4.15. The study showed that the female pupils recorded an average attendance of 52% while the male pupils recorded an average attendance of 48% for the five years under review.

Table 4.15: Pattern of Pupils School Attendance after the School Feeding Programme

Year of Attendance	Gender		
	Male	Female	Total
2017	1,119,960 (48%)	1,189,620 (52%)	2,309,580 (100%)
2018	1,159,020 (48%)	1,267,020 (52%)	2,426,040 (100%)

2019	1,277,100 (49%)	1,342,080 (51%)	2,619,180 (100%)
2020	1,208,160 (49%)	1,239,300 (51%)	2,447,460 (100%)
2021	1,294,020 (45%)	1,610,820 (55%)	2,904,840 (100%)

4.3.2.3 *Changes in attendance pattern before the commencement of school feeding programme*

The analysis on the changes in attendance pattern of pupils in the 9 selected schools across Chanchaga LGA, over a period of five years (2012-2016), before the commencement of school feeding programme is shown in Figure 4.7. The study showed that there were distinct changes in the attendance pattern of pupils in schools over time. From Figure 4.7, in 2013, there was a rise (3.7%) in the pupils' school attendance. Subsequently, in 2014, there was a record of 8.1% increase in attendance of both male and female pupils in the public schools. However, in 2015, there was a drop (4.5%) in the pupils' attendance in the public schools in the LGA. Furthermore, in 2016, there was a conspicuous significant change in the attendance pattern of pupils into the selected schools such that the attendance rose to 6.0% across the schools. By implication, the increase in pupils' school attendance across the LG in 2016 was influenced by the introduction of the national home grown school feeding programme.

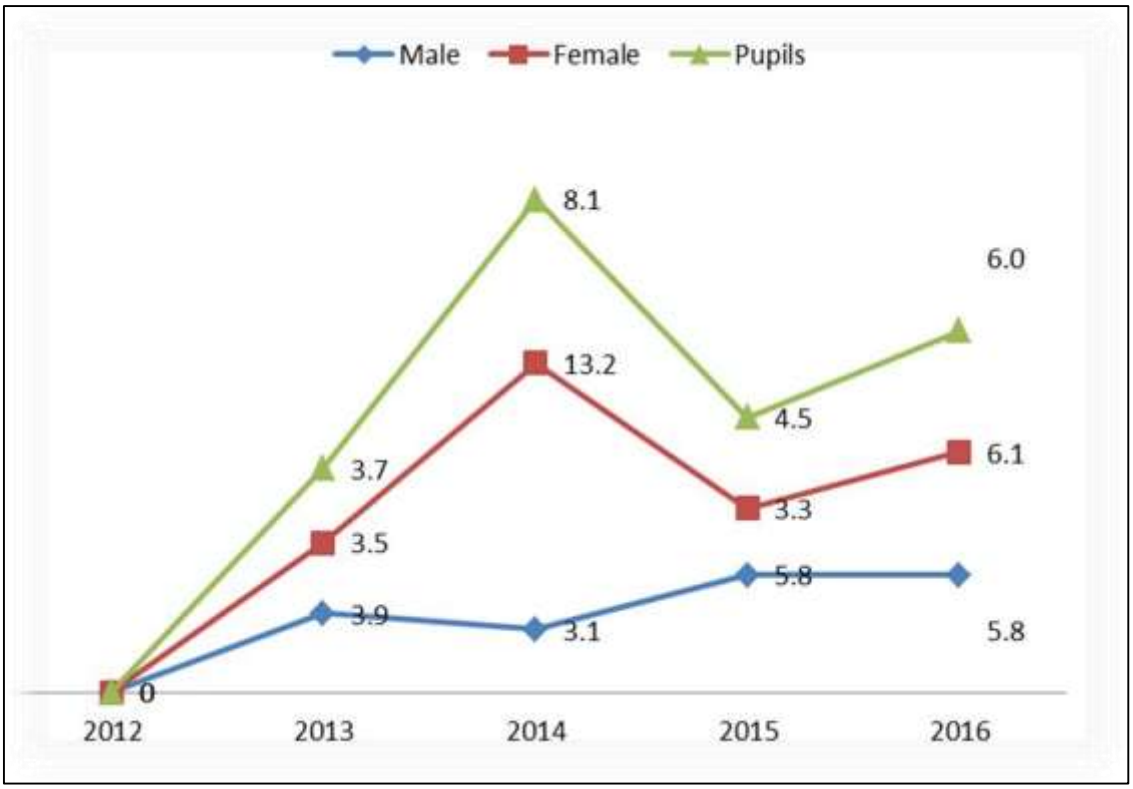

Figure 4.7: Changes in School Attendance Pattern before School Feeding Programme

4.3.2.4 *Changes in attendance pattern after the commencement of school feeding programme*

The analysis on the changes in attendance pattern of pupils in the selected public schools in the LGA, after the commencement of school feeding programme (2017-2021) is shown in Figure 4.8. In 2018, there was an obvious change (5%) in the pattern of pupils' school attendance in the public schools. The following year 2019, the attendance of these pupils in the schools improved as it was recorded 8%. This increase in school attendance may not be unconnected to the food served pupils while in school hence they look forward to going to school every day. However, in year 2020, there was a conspicuous negative decline in school attendance pattern (-6.6%) across the LGA. The decline in attendance was as a result of Covid'19 pandemic which led to lockdown and the introduction of stringent protocols such as social distancing. The process of observing the Covid'19 protocol must have affected the

feeding programme which in turn affected the pupils' turnout in the public schools. In 2021, there was a drastic positive change in the pattern of pupils' school attendance such that the pupils' turnout in school increased from -6.6% to 18.7%. This positive change in attendance must have been triggered by the Government conscious effort in pulling and retaining children in school through the feeding programme. This can also be corroborated with the fact that most of these pupils don't come to school with food (Figure 4.11) because they already expect to be taken care of by the national school feeding programme.

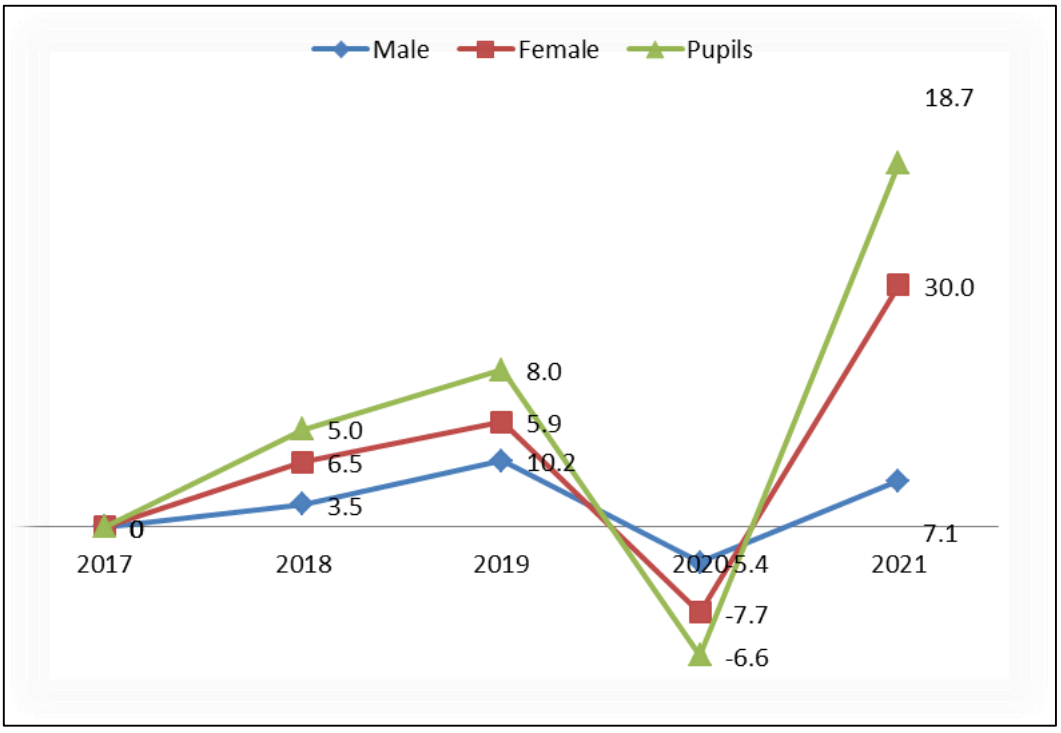

Figure 4.8: Changes in School Attendance Pattern after School Feeding Programme

4.3.2.5 *Pupils school attendance five (5) years before and after the commencement of school feeding programme*

The pattern of attendance of female, male and pupils in public primary schools in Chanchaga LGA was assessed and the result is presented in Table 4.16 The study revealed that school attendance of male pupils is higher after the commencement of school feeding programme (2017-2021) than before the programme started (2012-2016). The average annual total attendance for Male pupils before the SFP was 1,020,420, while male pupils' average annual total attendance after the SFP was 1,211,652. This shows that there is an increase in the attendance of male pupils in the public primary school after the commencement of the school feeding programme.

Table 4.16: Pupils Attendance Before and After School Feeding Programme

	N	Mean	Std. Deviation	Std. Error Mean
Male (Before)	5	1,020,420	73,833.69	33,019.43
Male (After)	5	1,211,652	74,595.03	33,359.91

In addition, the study further examined the difference in attendance pattern of male pupils using one sample T-test. The analysis recorded a p-value of 0.004 for both equal and unequal variances (Table 4.17). The p-values recorded is lower than 0.05. Therefore, there is a statistically significant difference in the pattern of male pupils' attendance in the public primary schools in Chanchaga LGA.

Table 4.17: Variation in the Pattern of Male Pupils' Attendance

		t	df	p-value (2-tailed)
Male (Before) – Male (After)	Equal variances	-4.07	8	.004
	Unequal variances	-4.07	8	.004

Similarly, the study also shows that average annual total attendance of female pupils after the commencement of school feeding programme is higher than the average annual total attendance of female pupils before the commencement of the programme. Table 4.18 shows that the average annual total attendance of female pupils before the Programme was 1,060,740, while average annual total attendance of female pupils after the commencement of the feeding programme was 1,329,768. This also indicates that there is increase in the school attendance of female pupils after the commencement of the school feeding programme.

Table 4.18: **Female Pupils' School Attendance Pattern Before and After the SFP**

	N	Mean	Std. Deviation	Std. Error Mean
Female (Before)	5	1,060,740	111,265.77	49,759.57
Female (After)	5	1,329,768	166,512.04	74,466.45

Consequently, the variation in female attendance pattern before and after the commencement of school feeding programme in Chanchaga LGA is presented in Table 4.19. The one sample T-test recorded a p-value of .017 and .02 for equal and unequal variances. This shows that the p-value reported for equal and unequal variances is lower than .05. Hence, this implies that there is a statistically significant variation in the pattern of female pupils' school attendance before and after the commencement of the SFP in Chanchaga LGA. This is similar to the pattern of male attendance reported in the preceding section.

Table 4.19: Variation in the Pattern of Female Pupils' School Attendance

		t	df	p-value (2-tailed)
Female (Before) – Female (After)	Equal variances	-3	8	.017
	Unequal variances	-3	6.98	.02

Furthermore, the study also shows that average school attendance of all the pupils in the public schools became higher after school feeding programme commenced in Chanchaga Local Government. Table 4.20 shows that the average annual total attendance of pupils before the SFP was 2,081,160, while average total attendance of pupils after the commencement of the feeding programme was 2,541,420 annually. Like the preceding analysis, this also indicates that there is increase in attendance record of pupils after the commencement of the feeding programme in the public schools across the Local Government.

Table 4.20: Pupils Attendance Pattern Before and After SFP in Chanchaga LGA

	N	Mean	Std. Deviation	Std. Error Mean
Total Pupils (Before)	5	2,081,160	183,228.95	81,942.48
Total Pupils (After)	5	2,541,420	231,306.9	103,443.59

Lastly, the variation in pupils' school attendance pattern before and after the commencement of SFP in Chanchaga LGA is presented in Table 4.21. The one sample Ttest recorded a p-value of .008 for equal variance and .009 for unequal variance. This shows that the p-value reported for equal and unequal variances is lower than .05. Hence, this implies that there is a statistically significant variation in the pattern of pupil's school attendance before and after the commencement of school feeding programme in Chanchaga LGA. This also similar to the pattern of male and female school attendance reported in the preceding sections.

Table 4.21: Variation in the Pattern of Total Pupils' School Attendance

		t	df	p-value (2-tailed)
Pupils (Before) – Pupils (After)	Equal variances	-3.49	8	.008
	Unequal variances	-3.49	7.6	.009

4.4. Pupils Daily Feeding Pattern in Chanchaga Local Government Area

In assessing the daily feeding pattern of the pupils, information was gathered on; pupils having meals before going to school, number of meals per day, food in lunch flask and taking money to school (Appendix G).

4.4.1 Meals before attending school

An analysis was done on 'meals before school' to ascertain if children eat food in the mornings before going to school. The result was therefore presented in Figure 4.9. The analysis established that in Chanchaga LGA, majority (70%) of the pupils eat before attending school while only 30% of pupils in the public schools come to school on empty stomach. In the light of the foregoing argument, the study has shown that feeding is not the primary factor affecting students' enrolment into school as corroborated by enrolment record (Table 4.12).

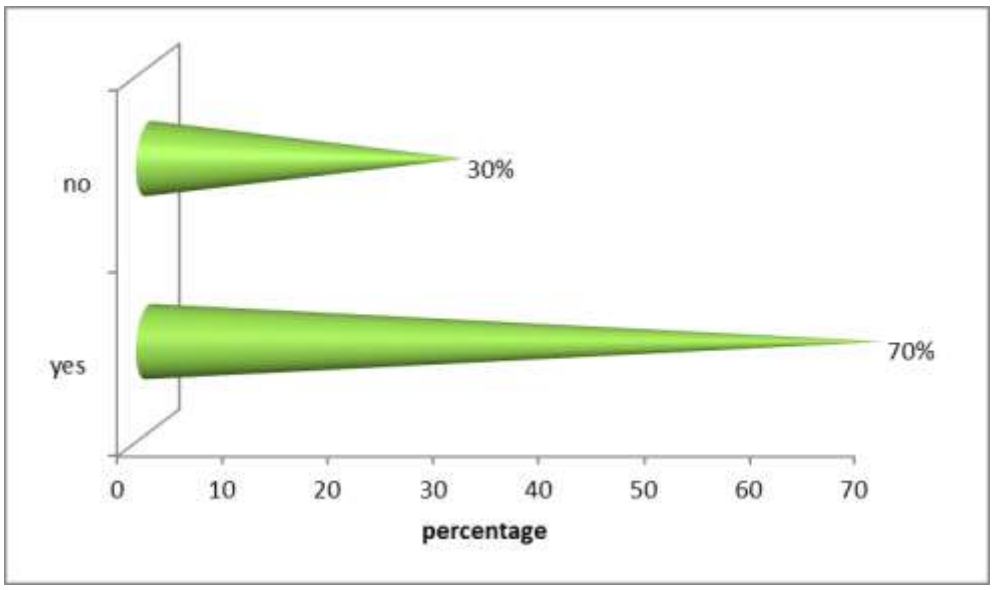

Figure 4.9: Meal before School

4.4.2 Number of meals per day

The number of meals pupils take per day in Chanchaga LGA was analysed and result shown in Figure 4.10. The analysis revealed that 55 % of pupils enjoy three-square meal per day, 27% eat more than three times a day which is over one quarter of the sampled population and only 2% of the pupils eat once in a day. It's therefore safe to say that in relation to the Federal Government SFP objectives, meal given in school has reduced pupils' short-term hunger because over 80 % of the pupils enjoy three-square meal hence improving their retention in school. This is corroborated by the increased attendance recorded after the commencement of school feeding programme (Table 4.19).

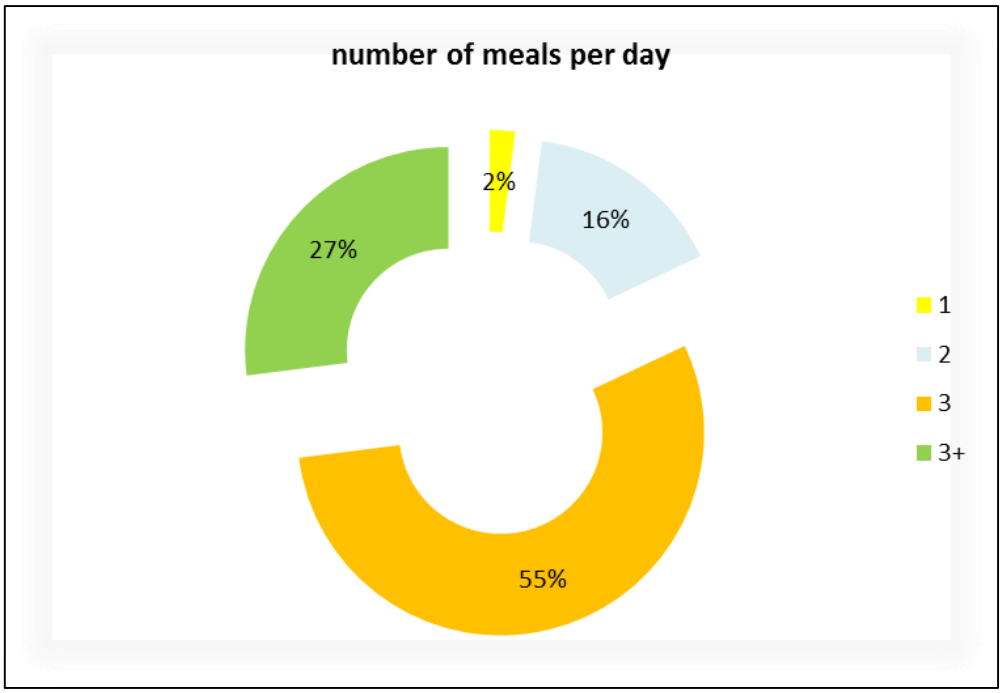

Figure 4.10: Number of Meals per Day

4.4.3 Food in lunch flask

The number of pupils that go to school with food in their lunch flask daily in Chanchaga LGA was analysed and the result presented in Figure 4.11. The survey indicated that majority (78%) of the pupils go to school without food in their lunch flask while only 22% go to school with food in their flask. The high proportion of pupils that go to school without food in their lunch flask may be as a result of the food provided during lunch break through the school feeding programme.

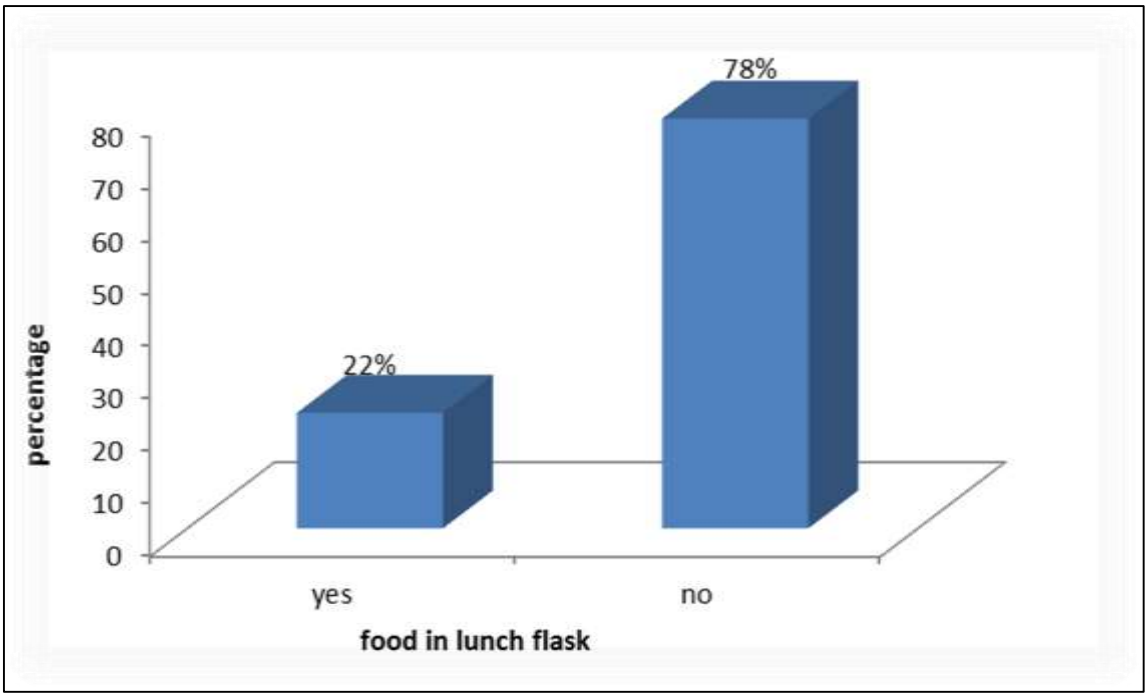

Figure 4.11: Food in Lunch Flask

4.4.4 Pupils taking money to school

A survey on pupils taking money to school was also conducted in the aforementioned public primary schools in Chanchaga LGA and analysis of the survey is presented in Figure 4.12. From the analysis, more than half (57%) of the pupils in the LGA do not take money to school while only 43% take money to school. This implies that pupils who do not take money to school are in majority. From the preceding Figure, if a pupil will not take food to school at least that pupil should be given money to buy something to eat in school. Where these two conditions are not met for a school child, then that child is faced with hunger and deprivation which is an aspect of poverty. Hence, the needs for intervention through the school feeding programme.

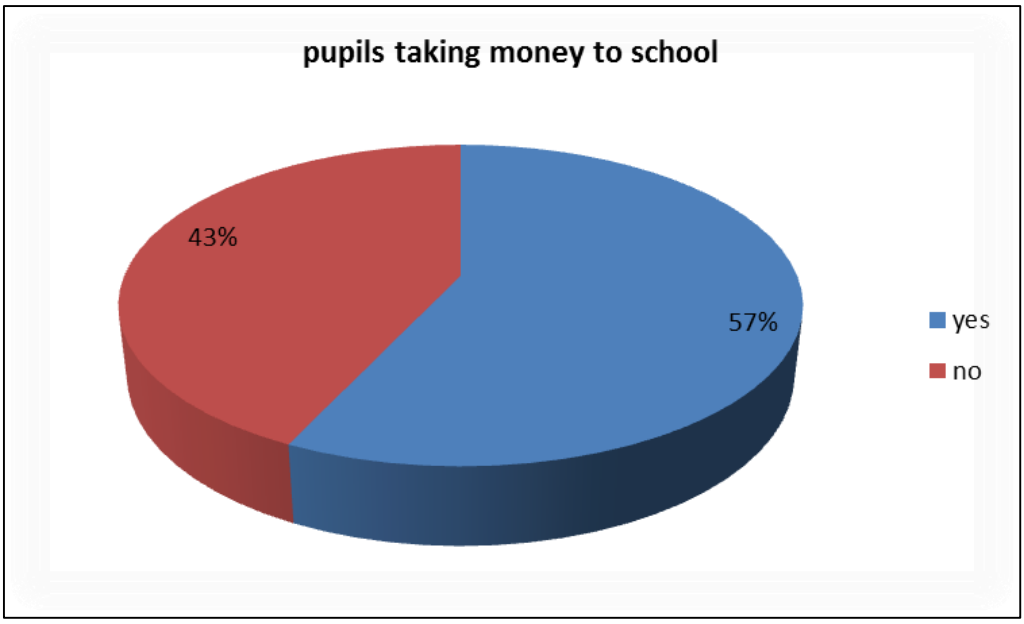

Figure 4.12: Money to School

4.5 Constraints to School Feeding Programme in Chanchaga Local Government Area

The study examined the constraints to effective implementation and success of the school feeding programme in Chanchaga LGA. The study identified nine constraints from extant review of literature and these challenges were presented to the head teachers and the cooks in each of the school for consideration using a five item Likert. Table 4.22 shows that corruption is the most challenging constraint to school feeding programme having recorded an index of 4.39 to rank 1st position. Poor remuneration of cooks ranked 2nd with an index of 4.25, while inadequate funding and high inflation ranked 3rd and 4th with an index of 4.10 and 4.05 respectively. These four factors were identified as major constraints to the successful implementation of the school feeding programme. In relation to high inflation and poor remuneration, the Cooks complained about the money for condiments not being enough to purchase the needed condiments hence making them spend out of their monthly stipend to augment. Going forward, corruption, funding, poor remuneration and inflation must be

addressed to improve the success of the National school feeding programme. However, political influence was the least ranked constraint with an index of 3.21 (9^{th}); poor budgetary allocation (3.53) and inconsistency in food supply (3.65) were among the least ranked constraints to the National school feeding programme in Chanchaga LGA. Poor supervision ranked 6^{th} with an index of 3.71 and poor storage facilities ranked 5^{th} with an index of 3.87. The implication of having poor storage facilities is that food supplied by smallholder farmers will not be properly stored and preserved hence leading to spoilage and wastage of food for the school feeding programme. This invariably can lead to food not being enough for school feeding of the eligible pupils in the Local Government.

Table 4.22: Constraints to School Feeding Programme

Item	Weighted Sum	Mean	Rank
Corruption	79	4.39	1
Poor Remuneration of Cooks	77	4.25	2
Inadequate Funding	74	4.10	3
High Inflation	73	4.05	4
Poor Storage Facilities	70	3.87	5
Poor Supervision	67	3.71	6
Inconsistence in Food Supply	66	3.65	7
Poor Budgetary Allocation	64	3.53	8
Political Interference	58	3.21	9

4.6 Summary of Findings

From the findings, there are thirty-four public primary schools in Chanchaga Local Government Area and all of these schools are benefiting from the National School Feeding Programme in the State. Out of the eleven wards in the Local Government, Two wards –

Makera and Nasarawa A wards do not have any public primary school. The menu used for feeding pupils in all the benefiting schools is approved by the State Government, based on crops grown by the local farmers within the State.

On compliance, Niger State feeding operational guideline is in line with the National School Feeding guideline because the State Government augments by providing food crops for the cooks, aside the money paid to them. Five hundred and forty (540) cooks were recruited from various communities where the benefiting public primary schools are located and all of these cooks are women. Food supplied to the cooks for the school pupils are locally sourced from the three senatorial zones (Niger North, South and East) while the other protein and carbohydrate contents (egg, meat and bread) which constitute part of the menu are also sourced locally within the communities in Chanchaga Local Government Area.

On school enrolment and attendance, from findings, there is variation in pupils' enrolment pattern before and after the commencement of school feeding programme in Chanchaga Local Government. Analysis has shown that pupils' average enrolment was higher before (17,307.8) than after (15,274.8) the commencement of feeding programme in public primary schools in the Local Government. The p-value reported for equal (0.018) and unequal (0.028) variances is lower than .05 implying that there is a statistically significant variation in the pattern of pupil's enrolment before and after the commencement of school feeding programme in Chanchaga LGA. This implies that the National school feeding programme has not improved enrolment pattern of pupils in the Local Government.

Furthermore, pupils' average school attendance is higher (2,541,420 annually) after the commencement of school feeding programme in Chanchaga Local Government than before (2,081,160 annually) the commencement of school feeding programme. The p-value reported for equal (0.008) and unequal (0.009) variances is lower than .05 implying that there is a statistically significant variation in pupil's school attendance before and after the commencement of school feeding programme in Chanchaga LGA. This also implies that the National feeding programme in the public primary schools has helped to improve the pupils' attendance to school.

From findings, analysis on Pupils' daily feeding pattern in nine (9) selected public primary schools in Chanchaga LGA shows that over (80 %) of the pupils in the Local Government enjoy three-square meal daily. The analysis also shows that majority (78%) do not attend school with food in their lunch flask because about (70%) of the school pupils eat at home before attending school. On the other hand, majority (57%) of the pupils do not attend school with money to buy food or snack during lunch break because they have absolute reliance on the feeding programme by the Government.

Lastly, the study identified nine major constraints to National feeding programme and these constraints were ranked according to their level of influence on the programme. The two highest ranked constraints using index were corruption (4.39) and poor remuneration of cooks (4.25) while the least of the challenges to effective implementation of National school feeding programme in Chanchaga LGA is political interference with an index of
3.21.

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

National School Feeding Programme is a good programme because it is a relief to parents and households. It is one of the Federal Government Social Investment Programmes that is directly and indirectly impacting the lives of poor Nigerians including women and children. The SFP is aimed at improving the health and educational outcome of children in public primary schools. Part of the objectives of the programme is to reduce short-term hunger by providing mid-day meals; improve pupils' school enrolment, attendance and completion rate in the primary school. With the objectives of SFP in focus, the study has examined the effects of National feeding programme on public primary school attendance in Chanchaga Local Government Area and ascertained that, SFP is not an incentive to pupils' enrolment into public primary school but rather, it is a booster of public primary school attendance in the understudied primary schools in Chanchaga Local Government Area.

In this regards, the study has shown that school feeding programme is not a priority to accessing primary school education in Chanchaga Local Government Area because majority of the pupils eat before going to school while some are given money to buy what to eat at school. There are other important programmes Government can adopt to improve access to education in the public primary schools than the feeding programme. Take for instance, educational materials such as text books and basic facilities like chairs and tables are grossly inadequate in nearly all the public primary schools understudied, leaving pupils sitting on the ground to learn.

The classes are overpopulated and unconducive for learning due to inadequate number of class room infrastructure. Provision of conducive and enabling environment should be of utmost priority rather than just feeding children in school. According to the head teachers in the selected public primary schools in the study area, the disadvantage of the programme is that pupils look forward to being fed thereby having negative attitude to their studies.

In conclusion, although, the objectives of the National school feeding programme have not been fully achieved since the feeding programme commenced in the State, the programme has also recorded success. This is asserted from the record of primary school pupils' attendance before and after the commencement of school feeding programme in Chanchaga Local Government Area. There is increase in record of pupils' school attendance after the commencement of school feeding programme in the public primary schools. In addition to the National school feeding programme, which serves as pull factor for primary school age children from poor families to access education, the State Government's attention should also be on providing enabling learning environment for these children. When the public primary schools are attractive and have good facilities for learning, parents will be encouraged to enrol their children into school and the pupils will be eager to attend school.

5.2 Recommendations

Based on the findings on National School Feeding Programme in Chanchaga Local Area, the following recommendations are hereby proposed that:

i. Government should provide public primary schools in Makera and Nasarawa A wards because these two wards do not have a single public primary school benefiting from the school feeding programme. If implemented, will reduce the

stress children from these two wards go through every day in accessing the feeding programme in the public primary schools in other wards.

ii. The State Government in collaboration with the Federal Government should include those classes (primary 4 -6) that are not currently eligible for the school feeding programme because some of the pupils in these classes are also from poor homes who cannot afford three-square meal in a day hence the programme becoming a relief to their parents. iii. There should be an upward review of cooks' stipends considering the current economic realities in the country.

iv. Fruits and vegetables should be added to the menu for the school feeding programme. For the pupils to have a balanced meal, all the required components should be complete.

v. The monitoring team should as often as possible visit the cooks at their various location of cooking to ensure that proper hygiene is observed at all times.

vi. Government should put in place, machinery to prevent the stakeholders from siphoning items meant for the school feeding programme.

vii. Better storage facilities should be provided by the Local Government to prevent spoilage and wastage of farm produce supplied by smallholder farmers in the locality.

5.3 Contribution to Knowledge

In assessing the National school feeding programme on school attendance in Chanchaga Local Government area of Niger State, the study has established that the National school feeding programme did not improve pupils' enrolment into school but rather improved pupils' school attendance in Chanchaga Local Government Area of Niger State, with 22% increase in attendance and 13% decrease in enrolment recorded within the first five years of the National School Feeding Programme. This assertion is contrary to the impression people have about school feeding programme. The research findings, also has proven that feeding is not a primary factor affecting pupils' enrolment into school as majority (70%) of the pupils who attended the public primary schools in the under-studied Local Government area eat at home before attending school.

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Appendix A: Schools Benefiting from the School Feeding Programme in the Wards

S/N	Names	Ward	Location
1	123 Primary School	Minna Central	Old airport road
2	Dr.Faruk primary school	KeterenGwari	
3	Kuyanbana primary school	Keteren Gwari	

4	Integrated Quranic Education (IQE) 123 primary sch.	Along the road beside bank of Agriculture/post office
5	IQE AlagbadoPri. School	Around Dr. Faruk Pri. Sch. Keteren Gwari 6
	Albishiri primary school	Minna South Albishiri
7	Nykangbe primary school	Nykangbe
8	Limawa primary school	Opposite the Muslim cemetery, Limawa
9	Talba housing estate primary school	Within the estate
10	Barkin sale nomadic	Barkin sale
11	Barikin sale primary school	Barikin sale
12	Gidan Alura nomadic primary technology	Behind new gate school of health school
13	Gwangwapi	After ECWA north church, Sauka-ka-wuta
14	IQE Bida road	Bida road
15	Angwankaje primary school	Sabon Gari Angwankaje
16	Jatabutu primary school	Along the road beside JAMB office
17	UBE Amadu Bahago, Gurussu	Along Gwada road
18	Angwanzaka primary school	Tudun Wada Gbeganu bypass North
19	Kpapi primary school	Before LG INEC office, bypass
20	UBE Tunga North primary medical road, Tunga	Along the road by Samande's school house, Top
21	M.I Wushishi primary school	Within the estate, Western bypass
22	New Tunga primary school	Tudun Wada Along fire service/police station/ South Haske hotel, off niteco road, Tunga
23	Umaru Audi primary school	Opposite former Diamond bank,

			Tunga
24	Dibbo primary school	After Talba farm gate, along building material market	
25	Waziri primary school	Limawa A	In-between Amitech& St. Michael church, Bosso road
26	UsmanNagogo primary school		Behind GSS, Bosso
27	IQE Madaki /SangayaMadaki	Around UsmanNagogo, Bosso	
28	Kwasau primary school	Limawa B	DutsenkuraGwari
29	IQE Zarumai	Around Geriman Mina's house,	Bosso
30	Dusenkura primary school	Along London rd. Dusenkura	
31	Kwalkwata primary school		
32	IBB primary school	Nasarawa B	Opposite the Chanchaga LG secretariat
33	Aliyu Muazu primary school	Nasarawa C	Opposite GSS Bosso
34	Taiyi primary school	After Habees catering services,	Taiyi

Source: Extract, Planning, Research and Statistics Unit, Office of Education Secretary, Chanchaga LG Secretariat, 2021.

Appendix B: Number of Vendors Employed for School Feeding Programme in Chanchaga Local Government Area

S/N	Names	Number of Vendors
1.	123 Primary School	18
2.	Dr.Faruk primary school	16
3.	Kuyanbana primary school	28
4.	IQE 123 primary school	2
5.	IQE Alagbado Primary. School	2
6.	Albishiri primary school	4
7.	Nykangbe primary school	10

8.	Limawa primary school	39	
9.	Talba housing estate primary school		2
10.	Barkin Sale nomadic	2	
11.	Barikin Sale primary school	41	
12.	GidanAllura nomadic primary school		2
13.	Gwangwapi primary school	22	
14.	IQE Bida road primary school	1	
15.	Angwankaje primary school	38	
16.	Jatabutu primary school	3	
17.	UBE AmaduBahago, Gurussupri. sch		2
18.	AngwanZaka primary school	18	
19.	Kpapi primary school	2	
20.	UBE Tunga North primary school	27	
21.	M.I Wushishi primary school	7	
22.	New Tunga primary school	23	
23.	Umaru Audi primary school	26	
24.	Dibbo primary school	3	
25.	Waziri primary school	22	
26.	UsmanNagogo primary school	23	
27.	IQE Madaki /SangayaMadakipri. sch.		2
28.	Kwasau primary school	30	
29.	IQE Zarumai primary school	2	
30.	Dusenkura primary school	20	
31.	Kwalkwata primary school	6	
32.	IBB primary school	36	
33.	Aliyu Muazu primary school	24	
34.	Taiyi primary school	10	
	Total		**540**

Source: Desk Officer, School Feeding Programme, Office of Education Secretary, Chanchaga LG Secretariat, 2021.

Appendix C: Pattern of Pupils Enrolment before the School Feeding Programme in Selected Schools

Kuyanbana Primary School				Barikin Sale Primary School			
Year of enrolment	**Gender**	**Total**	**Percentage (%)**	**Year of enrolment**	**Gender**	**Total**	**Percentage (%)**
2012	Male	499	49	2012	Male	1278	49
	Female	516	51		Female	1348	51
	Total	1015	100		**Total**	2626	100
2013	Male	619	48	2013	Male	1581	45
	Female	680	52		Female	1911	55
	Total	1299	100		**Total**	3492	100
2014	Male	733	52	2014	Male	1800	52
	Female	682	48		Female	1645	48
	Total	1415	100		**Total**	3445	100
2015	Male	843	52	2015	Male	1556	51
	Female	778	48		Female	1520	49
	Total	1621	100		**Total**	3076	100
2016	Male	949	51	2016	Male	1482	46
	Female	905	49		Female	1709	54
	Total	1854	100		**Total**	3191	100

Source: Author's field work, 2021

UBE Angwan Kaje Primary School				UBE Tunga North Primary School			
Year of enrolment	**Gender**	**Total**	**Percentage (%)**	**Year of enrolment**	**Gender**	**Total**	**Percentage (%)**
2012	Male	834	41	2012	Male	855	52
	Female	1213	59		Female	785	48
	Total	2047	100		**Total**	1640	100
2013	Male	1415	45	2013	Male	1098	53
	Female	1726	55		Female	965	47
	Total	3141	100		**Total**	2063	100
2014	Male	1000	50	2014	Male	1003	49
	Female	1001	50		Female	1042	51
	Total	2001	100		**Total**	2045	100
2015	Male	1044	50	2015	Male	711	51
	Female	1054	50		Female	691	49
	Total	2098	100		**Total**	1402	100
2016	Male	1122	51	2016	Male	1588	46
	Female	1068	49		Female	1832	54
	Total	2190	100		**Total**	3420	100

Source: Author's field work, 2021

Umaru Audi Memorial Primary School				UBE Waziri Primary School			
Year of enrolment	**Gender**	**Total**	**Percentage (%)**	**Year of enrolment**	**Gender**	**Total**	**Percentage (%)**
2012	Male	1060	52	2012	Male	552	47
	Female	983	48		Female	625	53
	Total	2043	100		**Total**	1177	100
2013	Male	1173	50	2013	Male	469	48
	Female	1188	50		Female	507	52
	Total	2361	100		**Total**	976	100
2014	Male	1060	52	2014	Male	525	47
	Female	983	48		Female	584	53
	Total	2043	100		**Total**	1109	100
2015	Male	751	49	2015	Male	467	46
	Female	776	51		Female	538	54
	Total	1527	100		**Total**	1005	100
2016	Male	1038	55	2016	Male	642	50
	Female	850	45		Female	639	50
	Total	1888	100		**Total**	1281	100

Source: Author's field work, 2021

Kwasau Primary School				IBB Primary School			
Year of enrolment	**Gender**	**Total**	**Percentage (%)**	**Year of enrolment**	**Gender**	**Total**	**Percentage (%)**

2012	Male	850	48	2012	Male	1264	49
	Female	920	52		Female	1334	51
	Total	1770	100		**Total**	2598	100
2013	Male	681	49	2013	Male	1312	51
	Female	718	51		Female	1244	49
	Total	1399	100		**Total**	2556	100
2014	Male	640	48	2014	Male	1302	51
	Female	680	52		Female	1240	49
	Total	1320	100		**Total**	2542	100
2015	Male	737	48	2015	Male	1224	51
	Female	808	52		Female	1182	49
	Total	1545	100		**Total**	2406	100
2016	Male	828	50	2016	Male	1155	51
	Female	818	50		Female	1097	49
	Total	1646	100		**Total**	2252	100

Source: Author's field work, 2021

Aliyu Muazu Sarkin Yaki Primary School

Year of enrolment	Gender	Total	Percentage (%)
2012	Male	643	58
	Female	473	42
	Total	1116	100

2013	Male	415	46
	Female	485	54
	Total	900	100
2014	Male	380	45
	Female	461	55
	Total	841	100
2015	Male	755	49
	Female	794	51
	Total	1549	100
2016	Male	793	49
	Female	815	51
	Total	1608	100

Source: Author's field work, 2021

Appendix D: Pattern of Pupils Enrolment after the School Feeding Programme in Selected Schools

Kuyanbana Primary School				**Barikin Sale Primary School**			
Year of enrolment	**Gender**	**Total**	**Percentage (%)**	**Year of enrolment**	**Gender**	**Total**	**Percentage (%)**
2017	Male	660	50	2017	Male	1271	49
	Female	648	50		Female	1302	51
	Total	1308	100		**Total**	2573	100

	Male	820	53		Male	1366	53
2018	Female	743	47	2018	Female	1429	47
	Total	1553	100		**Total**	2595	100
	Male	881	52		Male	1440	49
2019	Female	807	48	2019	Female	1520	51
	Total	1688	100		**Total**	2960	100
	Male	705	51		Male	1275	47
2020	Female	669	49	2020	Female	1418	53
	Total	1374	100		**Total**	2693	100
	Male	901	52		Male	1723	50
2021	Female	838	48	2021	Female	1694	50
	Total	1739	100		**Total**	3417	100

Source: Author's field work, 2021

UBE Angwan Kaje Primary School				**UBE Tunga North Primary School**			
Year of enrolment	**Gender**	**Total**	**Percentage (%)**	**Year of enrolment**	**Gender**	**Total**	**Percentage (%)**
	Male	988	49		Male	760	47
2017	Female	1020	51	2017	Female	845	53
	Total	2008	100		**Total**	1605	100

2018	Male	1070	47	2018	Male	816	47
	Female	1210	53		Female	906	53
	Total	2280	100		**Total**	1722	100
2019	Male	1141	48	2019	Male	194	46
	Female	1257	52		Female	226	54
	Total	2398	100		**Total**	420	100
2020	Male	1019	47	2020	Male	818	47
	Female	1135	53		Female	916	53
	Total	2154	100		**Total**	1734	100
2021	Male	1115	50	2021	Male	705	46
	Female	1119	50		Female	822	54
	Total	2234	100		**Total**	1527	100

Source: Author's field work, 2021

Umaru Audi Memorial Primary School				**UBE Waziri Primary School**			
Year of enrolment	**Gender**	**Total**	**Percentage (%)**	**Year of enrolment**	**Gender**	**Total**	**Percentage (%)**
2017	Male	1038	55	2017	Male	407	45
	Female	850	45		Female	500	55

	Total	1888	100		**Total**	907	100
2018	Male	458	50	2018	Male	344	47
	Female	455	50		Female	385	53
	Total	913	100		**Total**	729	100
2019	Male	933	58	2019	Male	511	48
	Female	682	42		Female	554	52
	Total	1615	100		**Total**	1065	100
2020	Male	563	46	2020	Male	503	51
	Female	653	54		Female	481	49
	Total	1216	100		**Total**	984	100
2021	Male	754	48	2021	Male	535	49
	Female	811	52		Female	560	51
	Total	1565	100		**Total**	1095	100

Source: Author's field work, 2021

Kwasau Primary School				**IBB Primary School**			
Year of enrolment	**Gender**	**Total**	**Percentage (%)**	**Year of enrolment**	**Gender**	**Total**	**Percentage (%)**
2017	Male	630	49	2017	Male	1058	54
	Female	667	51		Female	918	46
	Total	1297	100		**Total**	1976	100
2018	Male	755	44	2018	Male	1002	51
	Female	980	56		Female	948	49

	Total	1735	100		**Total**	1950	100
2019	Male	1095	47	2019	Male	1202	52
	Female	1239	53		Female	1106	48
	Total	2334	100		**Total**	2308	100
2020	Male	1075	48	2020	Male	1018	50
	Female	1187	52		Female	1016	50
	Total	2262	100		**Total**	2034	100
2021	Male	525	46	2021	Male	1069	51
	Female	623	54		Female	1036	49
	Total	1148	100		**Total**	2105	100

Source: Author's field work, 2021

Aliyu Muazu Sarkin Yaki Primary School

Year of		Percentage	enrolment	Gender	Total	(%)
				Male	546	52
2017	Female	504	48			
				Total	1050	100
				Male	550	51
2018	Female	538	49			
				Total	1088	100

				Male	676	50
2019	Female	676	50			
				Total	1352	100
				Male	526	51
2020	Female	506	49			
				Total	1032	100
				Male	756	49
2021	Female	778	51			
				Total	1534	100

Source: Author's field work, 2021

Appendix E: Pupils Attendance before the School Feeding Programme in the LGA

Kuyanbana Primary School				**Barikin Sale Primary School**			
Year of enrolment	**Gender**	**Total**	**Percentage (%)**	**Year of enrolment**	**Gender**	**Total**	**Percentage (%)**
2012	Male	64,620	52	2012	Male	149,760	49
	Female	59,940	48		Female	156,600	51
	Total	124,560	100		**Total**	306,360	100
2013	Male	64,800	51	2013	Male	160,200	48
	Female	61,200	49		Female	175,320	52

	Total	126,000	100		**Total**	335,520	100
	Male	73,260	50		Male	173,520	45
2014	Female	73,800	50	2014	Female	209,340	55
	Total	147,060	100		**Total**	382,860	100
	Male	76,320	51		Male	190,080	47
2015	Female	73,440	49	2015	Female	218,520	53
	Total	149,760	100		**Total**	408,600	100
	Male	80,280	50		Male	223,920	43
2016	Female	79,380	50	2016	Female	292,320	57
	Total	159,660	100		**Total**	516,240	100

Source: Author's field work, 2021

UBE Angwan Kaje Primary School

Year of enrolment	**Gender**	**Total**	**Percentage (%)**
	Male	157,320	57
2012	Female	116,640	43
	Total	273,960	100
	Male	164,700	53
2013	Female	144,540	47

UBE Tunga North Primary School

Year of enrolment	**Gender**	**Total**	**Percentage (%)**
	Male	68,760	46
2012	Female	80,100	54
	Total	148,860	100
	Male	91,800	54
2013	Female	78,300	46

	Total	309,240	100		**Total**	170,100	100
2014	Male	179,640	50	2014	Male	62,100	39
	Female	176,220	50		Female	96,120	61
	Total	355,860	100		**Total**	158,220	100
2015	Male	180,360	47	2015	Male	85,140	43
	Female	200,880	53		Female	114,120	57
	Total	381,240	100		**Total**	199,260	100
2016	Male	193,500	50	2016	Male	71,640	50
	Female	199,620	50		Female	72,000	50
	Total	393,120	100		**Total**	143,640	100

Source: Author's field work, 2021

Umaru Audi Memorial Primary School				**UBE Waziri Primary School**			
Year of enrolment	**Gender**	**Total**	**Percentage (%)**	**Year of enrolment**	**Gender**	**Total**	**Percentage (%)**
2012	Male	125,100	50	2012	Male	42,300	42
	Female	127,620	50		Female	58,680	58
	Total	252,720	100		**Total**	100,980	100
2013	Male	117,720	48	2013	Male	46,080	43
	Female	125,460	52		Female	62,100	57

	Total	243,180	100		**Total**	108,180	100
2014	Male	115,740	49	2014	Male	54,900	46
	Female	121,320	51		Female	63,180	54
	Total	237,060	100		**Total**	118,080	100
2015	Male	115,380	50	2015	Male	56,520	48
	Female	116,280	50		Female	61,020	52
	Total	231,660	100		**Total**	117,540	100
2016	Male	115,740	50	2016	Male	70,560	52
	Female	116,820	50		Female	64,800	48
	Total	232,560	100		**Total**	135,360	100

Source: Author's field work, 2021

Kwasau Primary School				**IBB Primary School**			
Year of enrolment	**Gender**	**Total**	**Percentage (%)**	**Year of enrolment**	**Gender**	**Total**	**Percentage (%)**
2012	Male	97,740	49	2012	Male	136,620	50
	Female	100,440	51		Female	136,080	50
	Total	198,180	100		**Total**	272,700	100
2013	Male	82,980	49	2013	Male	144,000	52
	Female	85,500	51		Female	133,740	48
	Total	168,480	100		**Total**	277,740	100
2014	Male	86,400	47	2014	Male	151,380	52
	Female	97,200	53		Female	142,020	48

	Total	183,600	100		**Total**	293,400	100
2015	Male	91,080	50	2015	Male	156,960	53
	Female	91,980	50		Female	138,600	47
	Total	183,060	100		**Total**	295,560	100
2016	Male	80,820	49	2016	Male	173,880	51
	Female	83,160	51		Female	166,680	49
	Total	163,980	100		**Total**	340,560	100

Source: Author's field work, 2021

Aliyu Muazu Sarkin Yaki Primary School

Year of enrolment	Gender	Total	Percentage (%)
2012	Male	95,040	50
	Female	94,500	50
	Total	189,540	100
2013	Male	101,880	51
	Female	96,660	49
	Total	198,540	100
2014	Male	107,460	49
	Female	110,520	51
	Total	217,980	100
2015	Male	110,340	50
	Female	111,240	50
	Total	221,580	100
2016	Male	113,760	49
	Female	119,700	51
	Total	233,460	100

Source: Author's field work, 2021

Appendix F: Pupils Attendance after the School Feeding Programme in the LGA

Kuyanbana Primary School **Barikin Sale Primary School**

Year of enrolment	Gender	Total	Percentage (%)	Year of enrolment	Gender	Total	Percentage (%)
2017	Male	80,820	49	2017	Male	228,240	49
	Female	82,980	51		Female	234,360	51
	Total	163,800	100		**Total**	462,600	100
2018	Male	86,580	52	2018	Male	249,480	49
	Female	80,280	48		Female	259,020	51
	Total	166,860	100		**Total**	508,500	100
2019	Male	97,560	53	2019	Male	276,300	47
	Female	86,760	47		Female	313,020	53
	Total	184,320	100		**Total**	589,320	100
2020	Male	88,020	48	2020	Male	189,360	46
	Female	93,960	52		Female	224,100	54
	Total	181,980	100		**Total**	413,460	100
2021	Male	95,580	51	2021	Male	200,700	47
	Female	90,540	49		Female	228,060	53
	Total	186,120	100		**Total**	428,760	100

Source: Author's field work, 2021

UBE Angwan Kaje Primary School **UBE Tunga North Primary School**

Year of enrolment	Gender	Total	Percentage (%)	Year of enrolment	Gender	Total	Percentage (%)
2017	Male	192,600	48	2017	Male	68,760	45
	Female	209,520	52		Female	82,620	55
	Total	402,120	100		**Total**	151,380	100
2018	Male	208,800	44	2018	Male	78,840	46
	Female	265,500	56		Female	91,080	54
	Total	474,300	100		**Total**	169,920	100
2019	Male	255,780	52	2019	Male	81,540	43
	Female	236,160	48		Female	109,800	57
	Total	491,940	100		**Total**	191,340	100
2020	Male	245,160	55	2020	Male	91,980	45
	Female	202,140	45		Female	110,340	55
	Total	447,300	100		**Total**	202,320	100
2021	Male	214,020	51	2021	Male	74,340	33
	Female	208,260	49		Female	147,960	67
	Total	422,280	100		**Total**	222,300	100

Source: Author's field work, 2021

Umaru Audi Memorial Primary School **UBE Waziri Primary School**

Year of enrolment	Gender	Total	Percentage (%)	Year of enrolment	Gender	Total	Percentage (%)
2017	Male	120,240	49	2017	Male	62,820	47
	Female	124,560	51		Female	71,820	53
	Total	244,800	100		**Total**	134,640	100
2018	Male	123,300	50	2018	Male	66,420	49
	Female	121,860	50		Female	68,400	51
	Total	245,160	100		**Total**	134,820	100
2019	Male	119,520	50	2019	Male	70,740	48
	Female	118,620	50		Female	77,940	52
	Total	238,140	100		**Total**	148,680	100
2020	Male	121,500	51	2020	Male	91,260	50
	Female	117,000	49		Female	90,360	50
	Total	238,500	100		**Total**	181,620	100
2021	Male	117,360	49	2021	Male	99,000	54
	Female	119,520	51		Female	85,500	46
	Total	236,880	100		**Total**	184,500	100

Source: Author's field work, 2021

Kwasau Primary School				**IBB Primary School**			
Year of enrolment	**Gender**	**Total**	**Percentage (%)**	**Year of enrolment**	**Gender**	**Total**	**Percentage (%)**
2017	Male	92,160	51	2017	Male	154,440	50
	Female	89,640	49		Female	155,700	50

	Total	181,800	100		**Total**	310,140	100
2018	Male	93,600	50	2018	Male	142,200	48
	Female	94,320	50		Female	155,340	52
	Total	187,920	100		**Total**	297,540	100
2019	Male	106,380	49	2019	Male	153,540	49
	Female	109,800	51		Female	159,300	51
	Total	216,180	100		**Total**	312,840	100
2020	Male	115,380	50	2020	Male	159,660	50
	Female	114,840	50		Female	157,680	50
	Total	230,220	100		**Total**	317,340	100
2021	Male	118,800	50	2021	Male	161,280	51
	Female	116,640	50		Female	156,060	49
	Total	235,440	100		**Total**	317,340	100

Source: Author's field work, 2021

Aliyu Muazu Sarkin Yaki Primary School

Year of enrolment	**Gender**	**Total**	**Percentage (%)**
2017	Male	119,880	46
	Female	138,420	54

	Total	258,300	100
2018	Male	109,800	46
	Female	131,220	54
	Total	241,020	100
2019	Male	115,740	47
	Female	130,680	53
	Total	246,420	100
2020	Male	105,840	45
	Female	128,880	55
	Total	234,720	100
2021	Male	212,940	46
	Female	245,340	54
	Total	458,280	100

Source: Author's field work, 2021

Appendix G: Assessment of Pupils in Selected Public Primary Schools in Chanchaga LGA

S/no	Name of Schools	Age of pupils	Gender		Meal before coming to sch.		No. of meals per day				Food in lunch flask		Money to school	
			M	F	Yes	No	1	2	3	3 +	Yes	No	Yes	No
1	Aliyu Muazu Sarkin Yaki Memorial	1-3 = 0 4-7 = 74 8-11 = 60 12-15 = 26 15+ = 3	69	94	113	50	5	31	97	3 31 0	132	108	55	
	Total no. of pupils in Classes 1-3	**163**	**163**		**163**			**163**			**163**		**163**	
2	Barkin Sale 95	1-3 = 0 4-7 = 20 8-11 = 68 12-15 = 73 15+ = 8		92	77	193	56	9	1 84 7		59	33	136	74
	Total no. of pupils in	**169**	**169**		**169**			**169**			**169**		**169**	

	Classes 1-3																	
		1-3 = 0 4-7 = 88																
3		UBE Tunga North 46 103	8-11 = 49		79		70		98		51	10 5	32		102		18	131
		12-15 = 12 15+ = 0																
	Total no. of pupils in Classes 1-3	**149**	**149**		**149**		**149**		**149**				**149**				**149**	
		1-3 = 0 4-7 = 23																
4	IBB	8-11 = 99 12-15 = 38	72	95	149		18	0	13	111		43	53		114		118	49
		15+ = 7																
	Total no. of pupils in Classes 1-3	**167**	**167**		**167**		**167**		**167**				**167**				**167**	
S/no	**Name of Schools**	**Age of pupils**	**Gender**		**Meal before coming to sch.**		**No. of meals per day**						**Food in lunch flask**				**Money to school**	
			M	**F**	**Yes**	**No**	**1**	**2**	**3**	**3 +**			**Yes**		**No**		**Yes**	**No**

5	Kuyanbana	1-3 = 0 4-7 = 26 8-11 = 71 12-15 = 38 15+ = 11	80	66	87	59	0	11	64	71	34	112	100	46
	Total no. of pupils in Classes 1-3	**146**	**146**		**146**		**146**			**146**			**146**	
6	Kwasau	1-3 = 0 4-7 = 92 8-11 = 34 12-15 = 10 15+ = 2	85	53	115	23	4	13	111	10	51	87	55	83
	Total no. of pupils in Classes 1-3	**138**	**138**		**138**		**138**			**138**			**138**	
7	Umaru Audi Memorial	1-3 = 0 4-7 = 17 8-11 = 69 12-15 = 34 15+ = 10	68	62	78	52	0	14	6 49 7	21	109	53	77	
	Total no. of pupils in Classes 1-3	**130**	**130**		**130**		**130**			**130**			**130**	
		1-3 = 0												

		4-7 = 31													
8	Waziri	8-11 = 94	72	95	149	18	0	13	4 3	111	53	114	118	49	
		12-15 = 16													
		15+ = 0													
Total no. of pupils in Classes 1-3			**141**		**141**		**141**			**141**			**141**		
9	UBE Angwan Kaje	1-3 = 0	133	27	135	25	9	16	94	4	44	116	119	41	
		4-7 = 24							1						
		8-11 = 107													
		12-15 = 18													
		15+ = 11													
Total no. of pupils in Classes 1-3			**160**		**160**		**160**			**160**			**160**		

Source: Author's field work, 2021