

**UNIVERSITY OF GHANA  
COLLEGE OF HUMANITIES**

**STAKEHOLDERS' PERSPECTIVE ON THE EFFECT OF THE FREE SHS POLICY  
ON GOVERNMENT'S BASIC EDUCATION INVESTMENT AND HOW IT  
AFFECTS ACADEMIC PERFORMANCE OF JUNIOR HIGH SCHOOLS IN THE  
AKUAPEM NORTH MUNICIPALITY**

**ELIZABETH GYANEWA SAFORO**

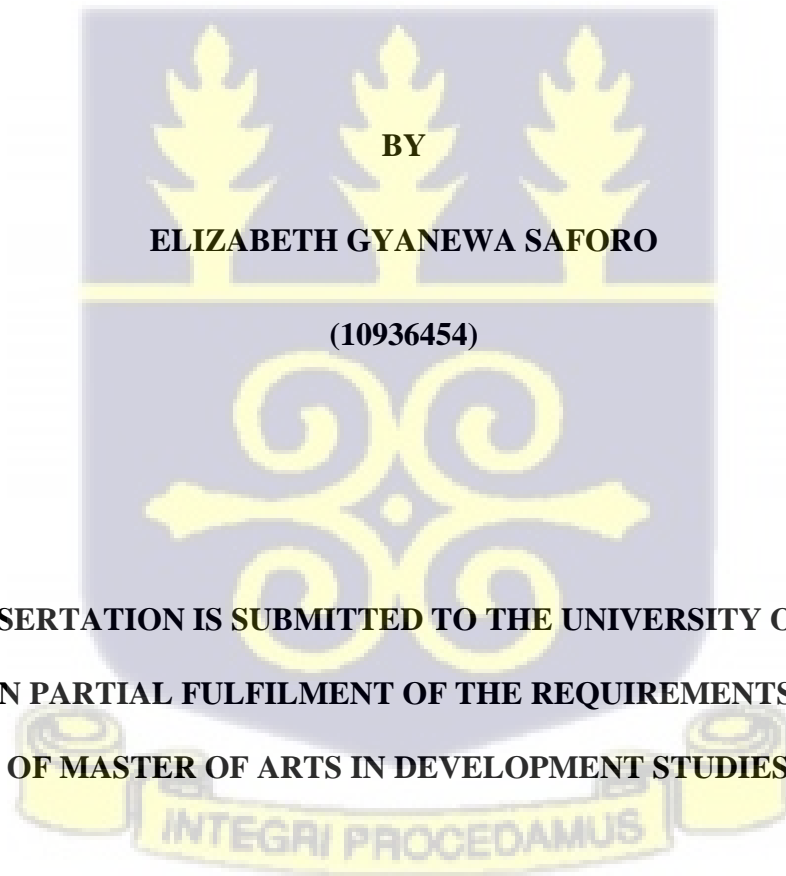
**INSTITUTE OF STATISTICAL, SOCIAL AND ECONOMIC RESEARCH**

**JANUARY, 2023**



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**THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA,  
LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE  
AWARD OF MASTER OF ARTS IN DEVELOPMENT STUDIES DEGREE**

**INSTITUTE OF STATISTICAL, SOCIAL AND ECONOMIC RESEARCH**

**JANUARY, 2023**

## DECLARATION

I, hereby solemnly declare that, with the exception of referencing other scholar's work which has been acknowledged accordingly, this thesis, **"STAKEHOLDERS' PERSPECTIVE ON THE EFFECT OF THE FREE SHS POLICY ON GOVERNMENT'S BASIC EDUCATION INVESTMENT AND HOW IT AFFECTS ACADEMIC PERFORMANCE OF JUNIOR HIGH SCHOOLS IN THE AKUAPEM NORTH MUNICIPALITY"** is the result of my own research work carried out in the Institute of Statistical Social and Economic Research (ISSER), under the supervision of **DR. ANDREW AGYEI-HOLMES** and that this thesis has neither in whole nor in part presented anywhere for the award degree and that any error is attributed to my personal limitations.

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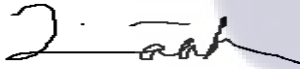


Date: 31<sup>st</sup> January, 2023

ELIZABETH GYANEWA SAFORO

(Student)

Sign:



Date: 31<sup>st</sup> January, 2023

ANDREW AGYEI-HOLMES (PhD.)

(Supervisor)



## DEDICATION

This research work is dedicated to my mother, Mad. Adelaide Owusua for being an unwavering support system in my life. God reward you greatly!



## ACKNOWLEDGEMENT

My first gratitude goes to God Almighty for His sustenance throughout this programme. I am extremely grateful to my supervisor Andrew Agyei-Holmes (PhD.) for his support, guidance and timely feedback during the course of this dissertation. His scholarly zeal and insights contributed to the quality of this thesis.

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God bless you all!



## ABSTRACT

Education is an important sector that the Government of Ghana is investing a lot of money into in order to secure the quality of education in the country. However, it is realized that though the budgetary allocation for the sector is huge, the assigned budget for basic schools keep reducing over the years. The higher cut of the budget is allocated to the Senior High Schools for the Free SHS Programme at the expense of the smooth administration of the basic schools.

The intent of this research therefore was to investigate whether the implementation of the Free SHS Programme has had a knock-on effect on government's investment into basic education and how it has affected academic performance in the Akuapem North Municipality in the Eastern Region of Ghana. The investment was conceptualized into five teaching and learning inputs namely: school building construction, teacher quantity and quality, pedagogical materials, provision of food and integrated health systems as these inputs are known to impact academic performance. The research was catalogued from 2017 to 2022 as 2017 marks the inception of the programme.

The study revealed that since the inception of the programme, there were no new infrastructure established by the government, supply of pedagogical materials were not forthcoming, number of teachers were enough but handicapped, the schools did not benefit from the School Feeding Program and the first aid boxes in the schools were not well stocked. The academic performance of pupils were seen to be average and the study validated the possibility of a policy knock-on effect of the Free SHS on government's investment into basic education and the fact that academic performance had declined over the stated period of years in these basic schools.

Based on the findings, the study recommended that government increases budgetary allocation for the basic level, invests in infrastructure, implements the school feeding programme at the JHS level, as well as partner with donor agencies to support the funding of the sector especially at the basic school level.

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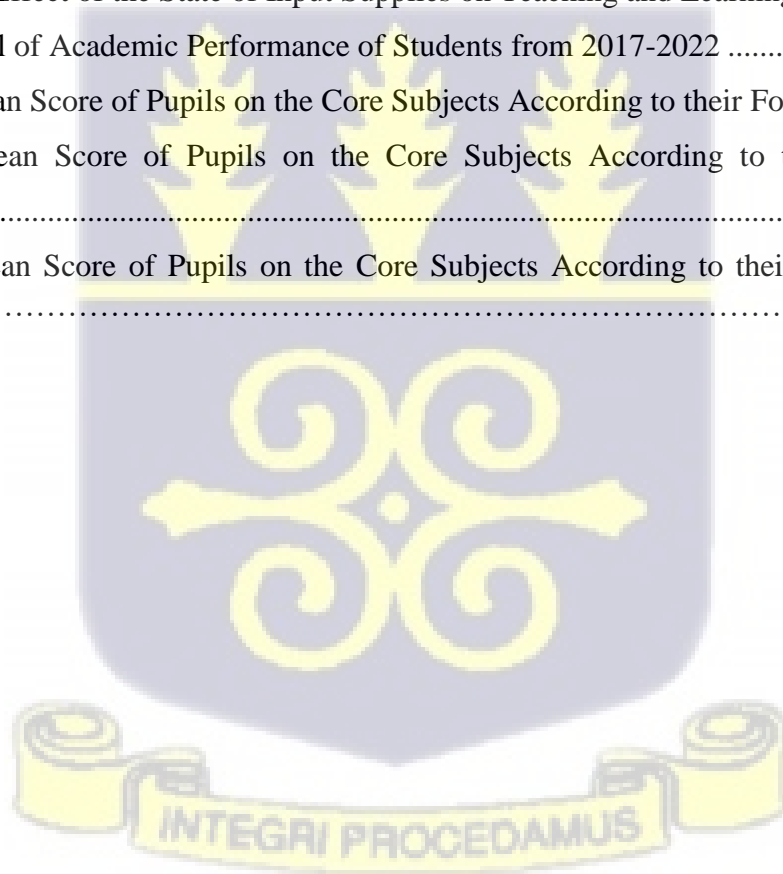
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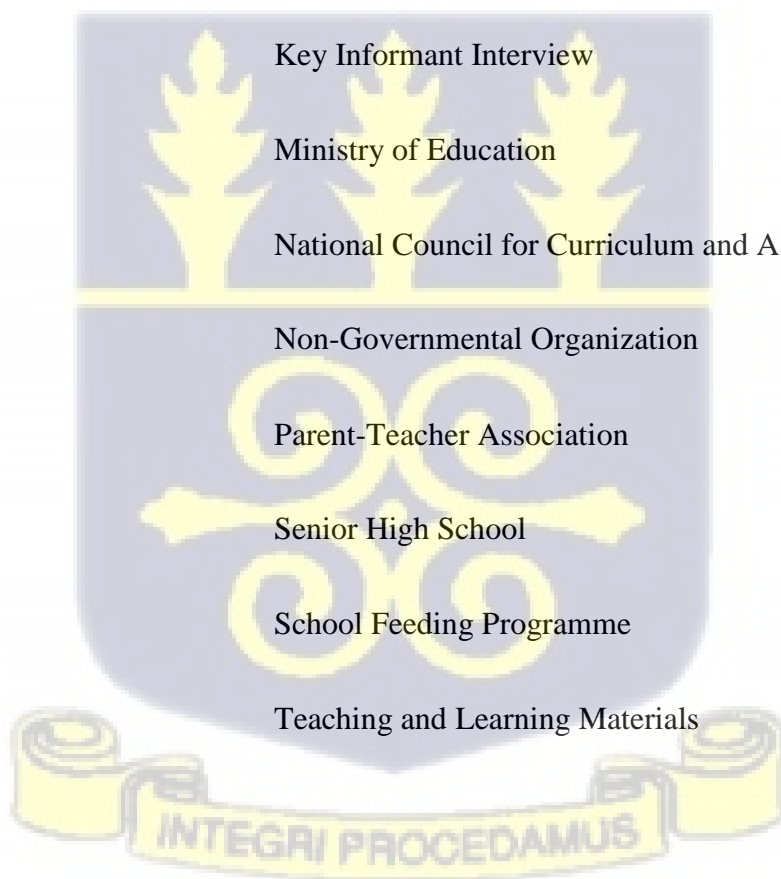
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## LIST OF ABBREVIATIONS

BECE	Basic Education Certificate Examination
COVID	Corona Virus Disease
FGD	Focus Group Discussion
FSHS	Free Senior High School
GES	Ghana Education Service
GoG	Government of Ghana
JHS	Junior High School
KII	Key Informant Interview
MoE	Ministry of Education
NaCCA	National Council for Curriculum and Assessment
NGO	Non-Governmental Organization
PTA	Parent-Teacher Association
SHS	Senior High School
SFP	School Feeding Programme
TLM	Teaching and Learning Materials



## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

Education is an imperative action as it is considered to be the starting point for all human endeavours in this day of globalization and technical advancement (Emilio, 2020). It is very significant since it has a positive effect on an individual's wellbeing as well as creating chances to improve living conditions (Battle and Lewis, 2002).

Due to the relevance of education, the quality of pupils' academic performance is a discourse that is of extreme significance to educators and other stakeholders (Farooq, Chaudhry, Shafiq, & Berhanu 2011). In light of this, many actors which includes educators, policy analysts, researchers, and other stakeholders have shown great interest in assessing the various factors that affect academic performance of students at various academic levels. Adane (2013) concludes that the academic performance observed in schools is as a result of the interplay of several factors.

According to Crosnoe, Johnson & Elder (2004), the factors known to affect academic performance can be based on variables that are relevant to students, parents, families, or schools. In terms of variables that are relevant to school, it centers on the nature of teachers, the physical structure and facilities of the school and the school environment. The various variables include teaching materials, the teacher qualification, the location and physical attributes of the school, the teacher-student ratio (Adane, 2013). Additionally, there are not enough trained teachers, no motivation for teachers, and inefficient monitoring of teachers (Anamuah-Mensah, 2010).

Adane (2013) found that a number of household characteristics, such as the family's socioeconomic position, which includes education, employment, and income level, can have an

impact on academic achievement. Other household factors include the household size, family structure and the parent's interest in education. It is noted that parents with little or no interest in education affect their ward's academic performance negatively (Currie,1995; Gregg & Machin, 1999), and the opposite is true, all things being equal as stated by Coleman (2006).

In addition to these factors are student related factors which include students' attendance to school, time dedicated to learning, paying attention in class, health status of the student as well as the student's personal motivation towards schooling (Adane, 2013). Also, the issues of gender and other social factors that pertain to students have a role to play in the achievement gaps and role differences (Emilio, 2020).

Various research has been carried out in Africa to look at the elements that influence pupils' academic success. In Kenya for example, Lloyd, Mensch and Clark (2000) conducted a research to identify the elements that influence academic performance and it was revealed that the schools with low performance were characterized by inadequate school facilities, little participation of students in learning, and the general school environment. It is observed in the findings from studies in Africa that there is an interplay of the three related factors in affecting academic performance of students.

In Ghana, numerous studies have been conducted for and by agencies, including the government which are accountable for education to identify the determinants of academic performance of students. The aim of these studies is to identify the factors and find possible ways to address them in order to help in raising pupils' academic performance. It is based on the findings that many interventions have been implemented to help reduce these factors' negative influence on academic performance and these interventions include the School Feeding Programme, the Free Senior High School Policy, the Ghana Accountability for Learning Outcomes Project and the Water Sanitation and Health Programme.

Despite the increased investment in the country's educational sector, the quality of education has not significantly improved (Akyeampong, 2009). The FSHS Policy in particular is investing a lot of money into education specifically at the Secondary Education Level leaving the Basic Education level with decreasing budgetary allocation as the years go by (UNICEF, 2022). Since school related factors have an impact on academic performance, it is against the backdrop that this study seeks to investigate the effect of the Free Senior High School Policy on government's investment into Basic Education and how it affects academic performance.

### **1.2 Problem Statement**

Basic education is one of the foundations for human development. How much you have learnt is one of the predictors on how far you will succeed in life (Asongu & Odhiambo, 2019). What is true on the individual level has crucial implications for a society's development or underdevelopment hence for any state to develop, there needs to be investment in education as that means investing in a country's future (Adane, 2013). The different levels of development between countries worldwide led to the preposition that, it is not so much the natural endowment of a country that determines its level of development but rather, its endowment with human capital (Schultz, 1961). In other words, a country's development depends on humans - and the better those humans are educated, the better a country can develop economically, politically and socially (Manuh et al., 2007).

Despite the knowledge on the importance of primary education, in Ghana, the quality of formal basic education is faced with numerous challenges affecting the standard of education and pupils' performance in basic schools. One of the key elements is the issue of government's investment in the basic school education system that has seen a significant reduction for basic education (Government of Ghana, 2017, 2018, 2019, 2020, 2021, 2022). The budget allocation of the Ministry of Education (MoE) to Teaching and Learning Materials, Water Sanitation and Hygiene (WaSH), and Goods and Services has declined by 56% since 2016 (UNICEF, 2022).

From 2022 onwards, the MoE is set to spend just 8.8% of its budget on goods and services in the basic education sector as compared to the expenditure of 14.67% in 2018, 13.19% in 2019, 10.3% in 2020, and 9.8% in 2021 (MoE MTEFs, 2018-2022). Significant expenditure on these services is crucial as they help with the provision of items like textbooks, chalks, markers, pens, and other educational materials to support learning. It is also used to provide teachers with training to equip them to be better teachers (UNICEF, 2022).

Interestingly, the significant budgetary reduction towards primary education comes at the time when the Ghanaian government is investing in second cycle education through its Free Senior High School Programme. Since its inception in September 2017 till date, it is noted that the majority of the budget allocated to education is channeled into the secondary schools in the form of classroom blocks, libraries, dormitories, textbooks, to mention a few, while the basic schools do not receive enough funds for effective administration (Government of Ghana, 2017, 2018, 2019, 2020, 2021, 2022).

As seen above, cutting back on funding for basic education could negatively affect students' academic achievement. Without the needed quality of education at the basic level, the human resource that will be channeled into the second cycle institutions may not have a solid foundation to build on. Currently, both academics and practitioners have not given attention to the unintended effects of the Free SHS Policy on basic education. To fill this gap, this study is being undertaken to examine the stakeholders' perspective on the Free SHS Policy on Government's Basic Education Investment and how it affects the academic performance of Junior High Schools in the Akuapem North Municipality.

In this study, the focus will be on basic education specifically Junior High Schools. This is because basic education is defined as the level of education in a country that constitutes the foundation stage to all children (Commonwealth Secretariat, 2012). Without this foundation,

children are unable to enter any further educational levels and hence are deprived of the chance to develop their full potential.

### **1.3 Research Questions**

1. How has the Free SHS Policy affected the supply of teaching and learning inputs from the government to the Junior High Schools within the Akuapem North Municipality?
2. How has the state of input supplies affected teaching and learning in the Junior High Schools within the Akuapem North Municipality?
3. How has the state of input supplies affected students' academic performance in the Junior High Schools within the Akuapem North Municipality?

### **1.4 Research Objectives**

1. To identify the effect of the Free SHS Policy on the supply of teaching and learning inputs from the government to the Junior High Schools within the Akuapem North Municipality.
2. To assess the effect of the state of input supplies on teaching and learning in the Junior High Schools within the Akuapem North Municipality.
3. To examine the effect of the state of input supplies on students' academic performance in the Junior High Schools within the Akuapem North Municipality.

### **1.5 Justification of the Study**

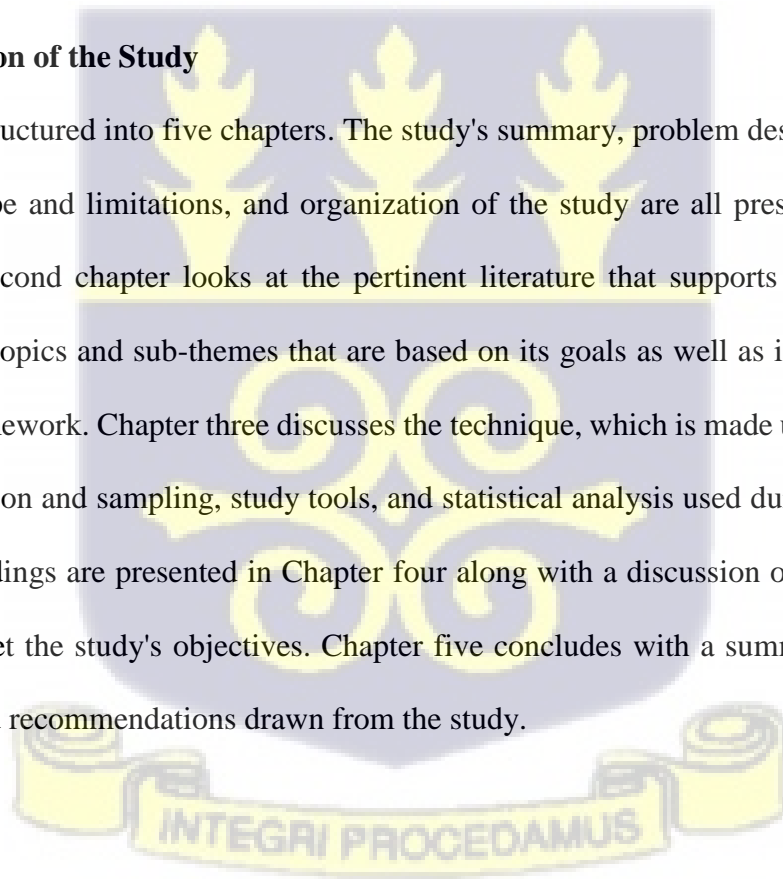
The expectation of this study is that it would help the relevant stakeholders of education in Ghana to know the effect of the FSHS Policy on the academic performance of basic school students and how best the policy can be reviewed, as well as how to ensure that there is a positive knock on effect of the FSHS Policy on basic education and not otherwise. This will greatly help to realize the objectives of basic education in Ghana.

### **1.6 Scope and Limitation of the Study**

The study is limited to the Akuapem North Municipality in the Eastern Region of Ghana. The focus of the study is to assess the effect of the Free SHS Policy on Government's investment into Basic Education and how it affects academic performance of Junior High School students in the Akuapem North Municipality. The study covers eight Junior High Schools selected from both the rural and urban communities within the municipality. The limitation of this research is that it is only conducted in the Akuapem North Municipality. Consequently, it would be challenging to apply the results to all basic schools in Ghana. This would not affect the originality of this research and it would create the basis for further studies on this topic in the future.

### **1.7 Organization of the Study**

This study is structured into five chapters. The study's summary, problem description, specific objectives, scope and limitations, and organization of the study are all presented in the first chapter. The second chapter looks at the pertinent literature that supports the study and is organized into topics and sub-themes that are based on its goals as well as its theoretical and conceptual framework. Chapter three discusses the technique, which is made up of the research design, population and sampling, study tools, and statistical analysis used during the research. The study's findings are presented in Chapter four along with a discussion of the information acquired to meet the study's objectives. Chapter five concludes with a summary of findings, conclusions and recommendations drawn from the study.



## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

The chapter presents the theoretical and conceptual frameworks adopted for the study which is the basis of the review of literature for this study. In this chapter also, I intend to structure the presently existing body of knowledge on my topic in three sections. In section one, I will briefly introduce the reader to the reports on the implementation of the Free SHS Policy and its unintended effects on Basic Education in Ghana. This is intended to ground this literature review on the assumption that so far, the Free SHS Policy has been implemented at the cost of basic education inputs. In section two, I will identify which teaching and learning inputs are relevant in order to understand and/or evaluate governments' investment into the sector. I will then proceed to detail the current state of these inputs in Africa. As a follow up, I will present scientific evidence of whether or not these inputs actually influence students' academic performance at the basic education level. In the third section, I will narrow down to present studies on the teaching and learning inputs, current state of government investment into those inputs and the relationship between those inputs and basic level education in Ghana.

#### 2.2 Theoretical Framework

This study adopted the Human Capital Theory which posits that human beings can rise their productive capability through greater education and skills training. The theory was postulated by the Economist Adam Smith however, the theory was popularized by Theodore Schultz in 1961 (Backer, 1994). The Human Capital Theory is a framework that study the relationships between investment and education, economic growth and social wellbeing. Operationalizing the theory, investment here refers to government's investment into basic education, education refers to education at the basic level which has academic performance as its means of verification.

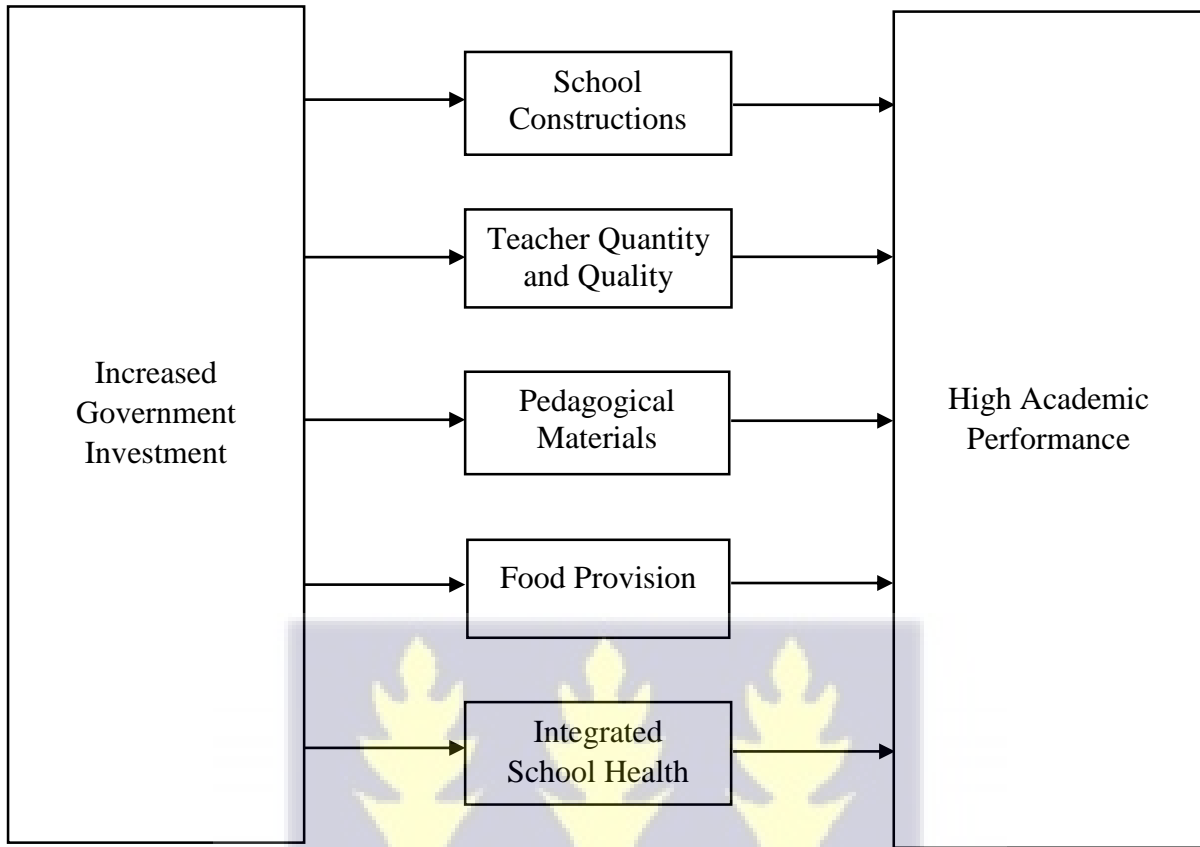
This theory throws emphasis on how investment in education, training and health goes a long way to increase people's aptitudes, knowledge, talent, capabilities, productivity, and well-being, as well as economic and social transformation in society. Human capital is generally linked with formal education as a means of facilitating the acquisition of knowledge and skills. It also gives consideration to other human capabilities which include nutritional and health status, creativity as well as leadership (Midgley, 2014). At the basic level, the most appropriate measurement of an increment in a child's aptitude, knowledge amongst others is to look at the final academic performance of the pupils at that stage.

Most Governments acknowledge the economic significance of human capital hence a notable allocation of resources have been directed to their formal education, day care and other literacy programmes. There has been a significant improvement in the budgetary allocations to health and nutrition as well. The Human Capital Theory provides a basis for diverse policies and programmes that promote the acquisition of knowledge and skills, improve people's health and nutrition to increase their capability in order to actively participate in the productive economy and also, experience a significant improvement in their standards of living (Midgley, 2014).

For the purposes of this study, the Human Capital Theory is ideal since it focuses on investment into the educational sector and its outcome thereof. From the constructs of this theory, human capital has to be well invested into in order to produce students with high academic performance rates and also, well skilled and healthy individuals who can live better lives to be productive members of the country's economy. It is therefore imperative that the state of investment into education, especially at the basic level, is studied to ascertain if the current state meets the needs of the basic schools in order to facilitate a successful teaching and learning process. More so, since the theory opines that investment into the educational sector aids in the teaching and learning process, it suggests a positive correlation between investment and academic performance which is the study's main focus.

### 2.3 Conceptual Framework

Table 2.1: Conceptual Framework



Source: Author's Construct, 2022

The study's conceptual framework illustrated above is drawn from the Human Capital Theory framework which posits that government investment into basic education has a positive effect on academic performance hence an increase in government's investment into basic education implies an increase in academic performance and the opposite is true all things being equal. Although academic performance goes beyond government's investment, this study focuses on how investment from the government affects academic performance in the Junior High Schools in the Akuapem North Municipality. In light of the above stated, the study conceptualizes that an increase in government's investment in the supply of inputs namely school construction, teacher quantity and quality, pedagogical materials, food provision and integrated school health can cause an increase in the academic performance of pupils within the Akuapem North Municipality in the Eastern Region of Ghana. The framework also hinges on the human capital

theoretical framework which posits that investment in education and training is crucial in increasing people's knowledge, aptitude and capabilities therefore by extension, the academic performance of pupils.

Investment in school construction means to build classroom blocks, libraries, I.C.T. labs, workrooms, washrooms and staff common rooms. To invest in teacher quantity and quality is to ensure that adequate number of teachers are posted to the schools and that they receive training and other capacity building workshops to help them perform their responsibilities as required of them. Investing in pedagogical materials is to provide the required teaching and learning materials for teaching and learning purposes. To invest in the provision of food is to supply food to pupils to ensure that they are well nourished, and to invest in integrated health services is to provide healthcare to pupils so that they are in optimum health to study.

These five inputs namely, school construction, teacher quantity and quality, pedagogical materials, food provision and integrated health services according to literature are known to affect academic performance therefore the study upon these foundations designed the conceptual framework to guide the study. These five teaching and learning inputs are further discussed in detail in the rest of the chapter.

#### **2.4 Implementing the Free SHS Policy and Reports of its Unintended Effects on Basic Education**

Public policy experts argue that policy making takes place in complex domains making it impossible for policy makers to be privy to all profit and costs hence disposing well intended policies to as much chances of success as risk of failure (Mueller, 2020; Braithwaite et al. 2018). Indeed, public policies fail more often than one may think owing to the challenges of (i) methods and processes, (ii) stakeholder and leadership issues and (iii) complexity and uncertainty (Andrews, 2018, 2019). The observation of a failing policy or the negative knock

on effect of a policy on other sectors and/or on parts of the same sector is seen during implementation and with the right government support can be remedied (Hudson et al., 2019).

Since 2017, several scholars have sought to explain and evaluate the FSHS policy of both the design and implementation stages. Most of the body of literature describes the FSHS policy as a *government secondary school cost absorption policy* to provide textbooks for core subjects, tuition and admission fees, the library, the science center, the computer laboratory, examination, boarding, utility costs as well as a free meal for boarding students and one free meal per day for day students. Indeed, the programme covers all second cycle educational institutions including agricultural, vocational and technical secondary schools (Chanimbe and Prah, 2020b; Nurudeen et al., 2018). As I have alluded to scholarly works on success or failure of government policies above, no government policy is fully proved from failure and/or knock-on effects. In this vein, both journalists and some scholars who have subjected the free SHS policy to journalistic reportage and scientific evaluation respectively have indicated that the policy has both policy making and implementation challenges despite its noble intention of increasing school enrolment at the secondary level (Sarpong, 11/24/2017; Mohammed, 10/11/2017; Chanimbe and Dankwah, 2021; Chanimbe and Prah, 2020a; Asante and Agbee, 2021). One of the unintended knock-on effects of the free SHS policy is government's neglected responsibilities to supply teaching and learning inputs at the basic education level as scarce resources are being channeled to sustain the second cycle institutions (Myjoyonline.com, 12/4/2022).

## **2.5 The Relevant Learning and Teaching Inputs in Basic Education and their State in Africa**

Based on a review of the literature, Glewwe and Muralidharan (2016) proposed that the most convenient way of understanding teaching and learning inputs is to assess the state of the topic of teaching and learning inputs from the following aspects (i) construction of new schools, (ii)

provision of pedagogical material (iii) Teacher quality and quantity, (iv) the provision of food and (v) the provision of medical service.

The world over, governments are directly responsible for the majority of the investments in basic education to ensure the provision of accessible quality education (Kuhl Teles and Andrade, 2008). The latter half of the 20th century marked the beginning of extensive investment by governments in education expansion as a global phenomenon though the drive to invest in basic education in industrialised countries had started as early as the mid-19<sup>th</sup> century (Roser and Ortiz, 2016).

In the so-called developing world of which Africa is a member, funding for basic education has increased exponentially since 2010 in low- and lower-middle-income countries by almost ten times (World Bank Group, 2021). This trend is encouraging but increasing expenses of developing countries is not blanket as stark differences exist within and between countries (Roser and Ortiz, 2016). That goes to show that developing countries still lack significantly in the provision of material input for basic education.

### **2.5.1 School Construction as a Basic Education Input**

A review of the literature did not produce any cross-national studies on the state of basic school construction in Africa. However, studies on individual countries show that African countries may be suffering overcrowded classrooms with little government investment in the construction of basic schools. The reports on Kenya and South Africa stand out in this case (Mutisya, 2020; West and Meier, 2020).

### **2.5.2 Provision of Pedagogical Materials as a Basic Education Input**

One of the authorities that studied learning and teaching materials in developing countries is Professor Tony Read. He has contributed significantly to what we know about the state of learning and teaching materials in the developing countries through his 2015 work for the World Bank titled “Where Have All the Textbooks Gone? Toward Sustainable Provision of Teaching

and Learning Materials in Sub-Saharan Africa”. Read (2015) bemoans the emerging evidence that there is a widespread lack of government investment in the provision of teaching and learning material in most developing countries. He argues that there is a widespread misunderstanding among ministries of education and development partners of the features and complexity of the problems to be solved. He submits that the provision of teaching and learning materials requires a variety of actions and inputs to operate efficiently in the correct sequence and a dysfunction at any point can affect the whole system. His subsequent works show that governments do not even have the data required to monitor the level of teaching and learning material deprivation in their countries (Read, 2017).

### **2.5.3 Teacher Quantity and Quality as a Basic Education Input**

Basic school teachers are in short supply in Africa (UNESCO, 2013). The United Nations argued in 2013 that for universal primary education, there aren't enough teachers in classrooms in around 58% of countries. They projected that by 2030, 2.1 million teaching positions will have to be created in Sub-Saharan Africa over and above the 2.6 million teachers leaving the profession who will need to be replaced. The more recent report of the International Task Force on Teachers for Education 2030 (2021) cautions that the proportion of teachers who are qualified in sub-Saharan Africa has been on the decline since the year 2000. They calculate the trained teacher pupil ratio in the sub-region's primary schools to be 1 teacher to 58 pupils. At this ratio, countries in sub-Saharan Africa will need to recruit 15 million teachers by 2030. As if this very poor ratio was not enough, these teachers are poorly trained too. The International Task Force on Teachers for Education 2030 (2021) argues that governments do not significantly invest in training teachers to give quality teaching experience to the pupils rather governments are interested in initiatives that increase enrolment and improve access. To make matters worse, there is not enough capacity in teacher preparation programmes to produce an adequate number of qualified teachers.

#### **2.5.4 Provision of Food as an Input for Basic Education**

Feeding at the basic education level is fast gaining popularity in Africa. There is one large scale survey based cross-national study that has studied sixty-eight school feeding programmes across thirty-eight sub-Saharan African countries as of 2019. Wineman et al. (2022) found that there is an expansion in school feeding programmes in Africa by 71% from 2013 to 2019. In the countries covered, school feeding programmes cover 23% of basic school pupils. African governments have supported such programmes through budgetary allocations. Together, the 38 countries spent 1,318,904,945 USD for the 2019 year only.

The feeding programmes in Africa are not without challenges. Governments' budgetary allocations to school feeding programmes are woefully inadequate causing such programmes to halt in the absence of donor support. Governments are also failing to invest in supply chains and logistics used in the storage and transportation of food stuff. This wastage goes undocumented because of weak monitoring and evaluation systems. This is leading to high rates of food spoilages. School feeding programmes are also suffering from shortage of personnel due to lack of resources and lack of training (Wineman et al., 2022).

#### **2.5.5 Integrated School Health as a Basic Education Input**

Integrated School Health as an input in primary education is not popular in Africa except for specific cases such as Kenya's Comprehensive School Health Policy (Wasonga et al., 2014), Nigeria's School Health Programme (Dania and Adebayo, 2019) and South Africa's Integrated Health Policy (Rasesemola et al., 2019). The closest cross-national study on the state of integrated school health programme are the studies on Water, Sanitation and Hygiene (WaSH) programmes. In 2017, Morgan et al. (2017) sought to document WaSH availability, continuity, quality, quantity, and dependability in 2270 schools that were randomly sampled in rural regions of six Sub-Saharan African countries in a multi-national cross-sectional study. Their

findings suggest that there are notably low levels of basic sanitation and hygiene services accessibility in primary schools in Africa especially in rural communities.

## **2.6 The Relationship Between Teaching and Learning Inputs and Academic Performance:**

### **What Do We Know?**

#### **2.6.1 Influence of Food Provision in Basic Schools on Students' Academic Performance**

Providing students with free meals at school can positively affect learning performance in two possible ways: Firstly, there are studies that suggest that the cognitive capacities of children improve when well nourished. A randomised evaluation of Ghana's national school feeding programmes lends credence to this idea (Aurino et al., 2020). The authors find improvements in average exam performance as a result of school feeding. The groups that improved most were girls and children from the poorest households. In Rwanda too, Mensah and Nsabimana (2020) find small but significant impacts of a school feeding programme on student test scores. However, Parker et al. (2015) found no discernible effects on the pupils' academic performance in a cluster randomised trial of school meals in rural Burundi, measuring solely health outcomes (haemoglobin and anaemia). Another study looked into the composition of the school meals and found in a randomised trial in Kenya that children eating animal protein scored higher test results than control groups.

The second argument about school meals is that, even if food does not directly improve cognitive abilities, it can have an impact on enrolment and attendance rates. This is because the access to free meals can assist in encouraging parents to send their wards to school particularly in very poor areas with low school attendance rates. Support for that thesis is found in rural Senegal where Diagne et al., (2014) and later Azomahou et al., (2019) found that the supply of school meals increased enrolment and test results using a randomized strategy. In Burkina Faso, providing take-home ratios increased enrolment rates of girls and attendance rates for both boys and girls (Nikiema, 2019).

These findings strongly imply that school feeding is a promising strategy for improving both cognitive outcomes and access to education, particularly for girls and those in food-insecure areas. However, there are also voices stressing the limitations of free food on schooling quality. A systematic literature review of 420 papers assessing more than 200 unique programme across 52 different low and middle income countries suggests that programmes typically improve either school involvement or learning outcomes, however not both (Snilstveit et al., 2015). One reason is that with increasing enrolment and attendance, classes grow but the sizes of classrooms and number of teachers remain constant which results in lower teaching quality.

### **2.6.2 School Constructions and Academic Performance**

The most fundamental condition for improvement in the education sector is the bare existence or construction of sufficient schools. Few studies have looked into how the construction of new schools influences enrolment rates and found a positive effect even several years later especially for regions with low school density. In Burkina Faso for example, a programme to construct schools improved enrolment, attendance and student learning both 7 and 10 years after the programme (Ingwersen Nicolas et al., 2019; Kazianga et al., 2019). Similar results were found in Niger (Bagby et al., 2016) and Benin (Deschênes and Hotte, 2019). Ashraf et al., (2020) found that only among ethnic groups in Zambia with a bride price custom did school construction boost girls' education. The findings underline that when there are not enough schools, construction is probably a prerequisite for other interventions to be effective. The construction of new schools is also an important factor counteracting the dilemma that more enrolments and attendances are likely to lead to overcrowded classes and overburdened teachers and hence to reduced teaching and learning quality.

Approaches that go further than to simply increase the quantity of schools ask ‘What is a child’s school? What does a school look like that a child would design rather than an adult? What should a school be like when the child is placed at the centre of the picture?’ (Smawfield and Du, 2006). Important aspects of this design process include the provision, design and use of

furniture to support participatory teaching methods and cooperative learning; the consideration of school and classroom displays; and the creation of a ‘happy campus’ by means such as the provision of space and facilities for sports and play and general improvement of the appearance and functionality of school grounds, often with active community involvement. Such a school allows for discovery learning (Clark, 2010). However, the strategy has significant limitations in areas where children do not have access to the internet or well-stocked libraries. Yet, programme have been developed that prove such child-friendly schools do not necessarily have to be expensive but enable children much better than conservative school set-ups (Barrett et al., 2006). For example, the Cluster Based Mentoring Programme in Pakistan encouraged teachers to create their own affordable resources (Rizvi and Nagy, 2016). And ‘Enlaces’ is an illustration of how ICTs are being used extensively in Chile to raise the standard of teaching and learning and make school curriculum more appropriate for the information age. (Hinostrroza et al., 2009). In all these examples, inputs contributed to the success of initiatives because they were appropriate to the environment and were introduced alongside teacher training. Materials must not only be chosen or created to complement desired instructional practices; their (non-)availability must also be taken into account.

### **2.6.3 Influence of Pedagogical Materials on Student Performance**

In this section, I am adopting a narrow definition of pedagogical material to mean textbooks and technological gadgets. The knowledge about the influence of textbooks and technological gadgets is a mixed one.

The majority of comprehensive studies on the effectiveness of teaching concur that textbooks and other learning resources are crucial for student achievement. For example, Velez et al., (1993) or Fuller and Clarke (1994) reviewed School Effectiveness studies in developing countries all over the world and found that approximately 50% of the reviewed studies proved significant positive associations between academic achievements and school inputs such as

textbooks and other instructional materials. However, they conclude that “*the marginal effect of dropping more inputs into classrooms [...] will surely diminish as basic quality levels rise*” (Fuller and Clarke, 1994, p. 134). A decade later, the importance of textbooks was confirmed by the World Bank’s Operations Evaluation Department’s review on the “determinants of education quality in developing countries” (Boissiere, 2004) as well as in studies by Michaelowa, (2001) in five Francophone Sub-Saharan African countries and Lee et al., (2005) in Southern and Eastern Africa. More recently, Ajoke, (2017) showed that when learning English as a second language, students in an experimental group that were taught with visual instructional materials performed significantly better in an exam in comparison to those in the control group that had no access to instructional materials. Also, in the Democratic Republic of the Congo, The availability of textbooks and financial incentives to take books home raised language test results and the likelihood that students would take the end of year exam. (Falisse et al., 2020)

However, there are also studies that dispute that more books are the simple and cost-effective solution to poor school quality. Some studies such as Glewwe et al., (2009) showed that providing textbooks only improved the performance of students that were already “academically inclined” while Evans et al., (2014) reported no impact at all in Sierra Leone. These studies corroborated earlier reports. Hanushek, (2005, 1995) and Hanushek and Luque, (2003) for instance argue that “*there are no clear and systematic relationships between key inputs and student performance*” (Hanushek, 1995, p. 232). The main argument is that the availability of resources does neither ensure their appropriateness nor their correct and efficient use. Hanushek claims this is true for both developed and developing countries. However, the sampled countries are all relatively wealthy, e.g. no African country is included in the analysis. Hence, the generalization of their findings to developing countries is problematic, particularly for African contexts and could also be a confirmation of Fuller and Clarke, (1994) thesis of the decreasing marginal utility of teaching and learning inputs. However, a weakness of all

quantitative studies is that they do not tell us about the quality of inputs, their suitability to curriculum or the school environment, whether they form part of an integrated plan for quality improvement initiative or indeed whether they are actually being used (Crossley and Murby, 1994; O'Sullivan, 2006).

In terms of education technology, when such technologies are effectively deployed they can complement traditional input (Bulman and Fairlie, 2016). Although there are no large scale cross country studies on the topic, For instance, in Nigeria, providing e-readers with curricular content in areas where textbooks were scarce (Habyarimana and Sabarwal, 2018). Johnston and Ksoll, (2017) proved in Ghana by experimenting with 70 randomly selected rural schools that with the technology for distance teaching (connection to a teaching studio in the capital), literacy and maths skills could be improved significantly. Similarly, in Senegal, the availability of interactive whiteboards impacted learning (Lehrer et al., 2019) and in Zambia, the provision of tablets and projectors to teachers impacted literacy and numeracy skills of first graders (Hoop et al., 2020). Reading proficiency improved in Kenyan primary schools was attributed to the use of interactive literacy software and a collection of digital books and stories. (Lysenko et al., 2019). Similar in Zambia, a phone based literacy game improved spelling abilities of students (Jere-Folotiya et al., 2014).

On the other hand, there are also some studies that find little to no impact of technology on student performance. For example, in Malawi, there was no impact on the performance of students that were provided access to Wikipedia and those who had no access (Derksen et al., 2020). Similarly, learning software together with the technological equipment needed to use the software had no consistent impact on primary school student learning in Angola (Cardim et al., 2021). Indeed, some experiments in South Africa suggest that in person studies is better for the long term skills acquisition as well as English oral communication of early learners than distance learning facilitated by technology (Kotze et al., 2019; Cilliers et al., 2022b).

#### **2.6.4 Influence of Teacher Quantity and Quality on Student Performance**

The most common way of accessing the influence of teacher quantity on student performance has been through pupil teacher ratio. At first glance, one may be deceived by the evidence (see. For example Filges et al., 2018, Hanushek, 2005 and Hattie, 2005) teacher ratio does not necessarily lead to better performance. However, the stage of education determines whether the above claim is true or false.

For primary education – which is of interest to this thesis – there are some findings proving that class sizes have effects on performance of pupils at the primary stages. One of those studies is contained in UNICEF’s (2021) policy brief for ministers of Education and Finance in West and Central Africa.

On the other hand, some studies find no positive impact of a reduced class size on academic performance. When the pupil-teacher ratio for grade 1 was reduced from 82 to 44 in Kenyan primary schools, it had no effect on test scores for pupils who remained within the standard system (Duflo et al., 2015). This is attributed to the reduction in effort of the teachers. Indeed in South Africa, Köhler, (2022) finds that classroom size is only important to performance when other factors such as poverty are factored into the equation.

The quality dimension of teachers as input shows that teacher professional development has effects on student participation.

One of the most authoritative work on cross-national studies of teachers’ formal education and its impact on pupils is Majgaard and Mingat’s (2012) work to show that teachers’ educational attainment beyond 10-11 years of general education before entering their pedagogical training. However, training and retraining has positive effects on the student performance. Earlier reviews showed promising evidence on pedagogical interventions (Conn, 2017), but that is not to say that most teacher professional development programmes are effective. On the contrary,

the vast majority of at-scale teacher professional development programmes in Africa (and elsewhere) go unevaluated in any serious way and many among those do not have the characteristics common to programmes that have been shown to be effective (Popova et al., 2018). Still, recent evidence bolsters the view that teacher professional development—particularly coaching programmes—can be effective at boosting student learning outcomes. For examples, see Duflo et al., (2020), Beg et al., (2020), Wolf et al., (2019) and/or Amadu et al., (2020) in Ghana; Cilliers et al., (2019) and Cilliers et al., (2022a) in South Africa; Jukes et al., (2017) and Donfouet et al., (2018) in Kenya; Özler et al., (2018) in Malawi and Blimpo and Pugatch, (2021) in Rwanda.

### **2.6.5 Influence of Integrated School Health on Student Performance**

Studies on health programmes and their impacts on pupil performance are generally fewer than in the non-health area (Sabet and Brown, 2018).

Morgan et al., (2017) studied the influence of WaSH programmes in primary schools in Ethiopia, Kenya, Mozambique, Rwanda, Uganda, and Zambia. They find a positive relationship between the availability of WaSH programmes in primary schools and better school outcomes. The above position is further supported by Chirgwin et al., (2021) that reviewed several WaSH programmes across low – and middle-income countries including African countries such as Kenya.

## **2.7 Teaching and Learning Inputs in Ghana: State of the Arts**

In this section, I intend to bring home the discussion of the existing literature on the five dimensions of basic education investment in Ghana. To do this, I will narrow my focus on those literary works that focus solely on Ghana.

### **2.7.1 State of Basic School Infrastructure**

Basic school availability or inadequacy of infrastructure has been figured for many anomalies in Ghana's pre-tertiary setting. For example, Anlimachie and Avoada, (2020) contend that the

rural-urban divide in pre-tertiary education in Ghana is primarily caused by infrastructure. It also affects the high attrition rate amongst pre-tertiary teachers (Agezo, 2010) as it is estimated that between 20% to 25% of school dropouts are attributable to poor basic education infrastructure (Ghanaian Times, 07/22/2022). The Schools under Trees and Emergency Intervention Programme (SUTEMIP) is a Government of Ghana intervention to improve on the inadequacy of basic education infrastructure. The project sought to construct 5000 schools by 2016 but could only complete 1400 schools by 2015. The project has been evaluated to have under-achieved due to project management challenges (Atia, 2018).

Basic infrastructure has not improved significantly at the basic education level. It is reported that there are about 5403 basic schools under trees, sheds and dilapidated structures by the ministry of education's count (Ghana Web, 10/29/2021). As of the time of writing this thesis, it was estimated that an amount of 3.5 billion Ghana Cedis is needed to remove the 5406 basic schools under trees (Ghana Education Service, 2021).

From the website of the Ghana Education Service, the sector is now solely reliant on the VALCO Trust Fund project to eliminate the schools under trees (Ghana Education Service, 2021). Indeed, a look at subsequent government budgetary allocations to the basic education sector makes no provision for removing schools under trees (Ministry of Education, 2022).

### **2.7.2 State of the Provision of Pedagogical Materials**

There is the general understanding that there is inadequacy of pedagogical materials which is also referred to as teaching and learning materials. As early as 2012, the Ministry of Education reported on the unavailability of teaching and learning materials (Ministry of Education, 2012). Indeed, the situation has not improved as recently as in 2021 (Oppong Frimpong, 2021). The unavailability of teaching and learning materials are reported to be significantly widespread in the country (Oppong Frimpong, 2021).

The inadequacy of teaching and learning materials in Ghana is documented in various publications across the country. Global Education Monitoring Report Team (2022) reported that their stakeholder engagements in Ghana shows absence of textbooks for the new curriculum in all schools they visited. Printing and distributing of NaCCA-approved textbooks for all subjects and classes covered by the 2019 curriculum is an urgent priority. In the Central Region of Ghana, Adu-Yeboah's (2020) work revealed through stakeholder engagements that the delay in the supply of teaching and learning materials hamper smooth running of academic work irrespective of school type and settlement. Similar studies in the Central region is the work of Quansah et al., (2019) in the area of teaching and learning materials of integrated science. Benedict (n.d) has extensively reported on the short supply of teaching and learning materials in rural Ghana especially in the Northern regions from the perspective of a non-governmental practitioner. Amuzu et al., (2022) also corroborates the position of Benedict that the lack of teaching and learning materials are very predominant in the northern parts of Ghana.

The challenges in the provision of basic schools with teaching and learning materials is reported to have negative consequences for pupils' performance in end of term and final BECE exams. It is not surprising that in northern Ghana where there is little supply of teaching and learning materials, the factor tops all teaching environment factors that contribute to the negative performance of pupils in the BECE examinations (Abdallah et al., 2014). In the southern part of Ghana, Baidoo-Anu, (2018) ranks teaching and learning materials to place second in influencing student performance in the Asikuma-Odoben-Brakwa District.

In view of the negative effects teaching and learning materials are having on performance, development partners such as the USAID are increasing their support in the area (The Daily Guide, 2/9/2022).

### 2.7.3 The State of Teacher Quantity and Quality

In the last decade, the number of primary school teachers in Ghana has been increasing in total (UNESCO Institute for Statistics, 2022). However, this trend looks less auspicious when a closer look is taken at the distribution of teachers. A survey on teacher attrition conducted by Ghana National Association of Teachers (GNAT) in 2018 revealed that majority of teachers in Ghana dislike teaching in rural areas (Sottie, 5/8/2019). The study carried out in five districts within the Central Region in Ghana suggests that less than two thirds (60.4%) of the Primary and Junior High school teachers in those regions were trained whereas more than one third (39.6%) were untrained.

Another survey by the Teachers and Education Workers Union (TEWU) in 2010 revealed that in rural areas the teacher:pupil ratio is substantially higher in rural areas than in urban areas (Sottie, 5/8/2019). While the national average is 1:29, in some rural schools in Sekyere Central District, Ashanti Region-Ghana, one teacher is responsible for up to 87 students (Azewara et al. 2021). Also, teacher attrition is a problem in Ghanaian schools. According to several studies, about 10,000 teachers leave the classroom every year, notably in rural areas, to look elsewhere for better employment (Bame 1991; McCall 2021; Acheampong and Gyasi 2019). As long recognised, frequent and constant changes of staff at a school have negative implications. They lead not only to poorer quality in terms of pupils' discipline and performance (Theobald, 1990; Konadu, 1994; Evans and Yuan, 2018; Alolo, 2016) but are as well obstructive for the long-term planning and development of schools (Ingersoll, 2001; Ingersol et al., 2018).

Further, the motivation and necessary dedication of otherwise jobless (young) people that see teaching as a bye-pass venture to a job they actually have been trained for and they desire is unsurprisingly low (Akinfe et al., 2012). The lack of appreciation and respect towards rural school teachers by parents and community members reinforces the low commitment of such teachers (Anlimachie, 2015; Anlimachie and Avoada, 2020; Essuman and Akyeampong, 2011).

There is one relatively recent study in Ghana that seeks to understand the relationship between students' academic achievement and teacher quality (Bonney et al., 2015). Motivation for the study was an outcry that the academic performance of pupils in Sekondi Takoradi Metropolitan Assembly (STMA) is lower than anticipated as a majority of the pupils cannot speak English well and read fluently despite the fact that most teachers at the schools that were included in the analysis held the necessary academic qualifications to be a teacher in Ghana. The authors conducted an effectiveness rating of the teachers including their qualification and survey results about their teaching methods. The study's findings, however, indicate that there was no correlation ( $r=0.451$ ) between the academic performance of the students and the quality of the teachers in the Sekondi-Takoradi Metropolitan Assembly. This finding contradicts earlier studies from Nigeria by Adu and Olatundun (2007), Lockheed and Komenan (1988) and Maduka (2000) which indicated that effective teachers produced high performing students. The discrepancy between the studies 'findings does not only underline the difficulty of measuring 'teacher quality' but also suggests that the causes for academic performance of pupils are likely to be multifaceted.

#### **2.7.4 The Provision of Food**

It is clear in the literature that feeding students, especially at the basic level in relatively poorer countries has an influence on the performance of students. In Ghana, the Ghana School Feeding Programme is the government's initiative to provide basic school pupils with food. The GSFP was piloted in 2005 with 10 pilot schools and currently covers over 2,600,000 beneficiary pupils in about 9000 schools in all the Metropolitan, Municipal and District Assemblies (Ghana School Feeding Programme, 2021). The programme is seen by some scholars as a politically popular social protection (Alderman and Bundy, 2012).

There is scientific work that proves that there is a positive relationship between the GSFP and school enrolment, retention and cognitive performance across Ghana (Salifu et al., 2018; Milledzi et al., 2017; Aliu and Fawzia, 2014; Owusu Gyasi et al., 2018; Konzabre 2018; Abdul

– Kudus, 2011; Tagoe, 2018; Odame, 2014). Of the studies that investigated the impact of the GSFP on test score/academic performance and cognitive effects, Aliu and Fawzia, (2014) discovered that students who received school meals performed better on tests and were more attentive in class in the Tamale Metropolis. Owusu Gyasi et al., (2018) found out that the quality of food provided to beneficiary pupils improved their academic performance in the Bawku Municipality. Milledzi et al., (2017) also found an increase in the academic performance of pupils as the GSFP was introduced in South Tongu District in the Volta Region. Tagoe, (2018) also found significant improvement in the academic performance of primary school pupils in the Accra central district. Abdul – Kudus, (2011) and Konzabre, (2018) also claim there is an association between the GSFP and cognitive development due to the retention in schools and academic progression of beneficiaries. The only study that did not find a consistent finding is Odame, (2014). Odame, (2014) examined the effect of the GSFP on educational achievement in the Tema municipality. The study found that pupils’ test scores improved in some of the benefiting schools, but the test results were inconsistent.

There are several studies that have appraised the GSFP and its influence on student performance. One of the recurrent themes in the literature relates to the problematic nature of beneficiary school selection which is motivated largely by political patronage and not by poverty and low enrolment (Botchwey, 2021). Because of the intended political gains, the programme is not only thinly spread but also creating inequality amongst beneficiary and non-beneficiary schools (Manful et al., 2015). Iddrisu et al., (2022) turned their attention to how the non-involvement of GES and school teachers in the feeding programme limits the potential of the programme to enhance enrolment and attendance.

### **2.7.5 The Provision of Medical Services**

Health service provision to children within the age bracket of basic schools is not tied to school enrolment in Ghana. Historically, Ghana’s approach to health care delivery has been universal

because of the predominantly socialist posturing of governments since independence (Abukari et al., 2015). Currently in Ghana, the National Health Insurance Scheme is the state subsidised health care providing programme in Ghana. The National Health Insurance provides free health service for children from the ages of 0 to 5 years and the coverage is widespread amongst this age group (Anaba et al., 2022). This age group is largely found in kindergartens to primary class one. Also, there is the indirect exemption of children under the age of 18 whose parents are insured (Kanchebe Derbile and van der Geest, 2013). This means that majority of school going children are likely to be insured since about 68.6% of adult Ghanaians are insured (Ghana Statistical Service, 2022) . By the mere fact that by parent insurance, children can have access to health care, leads to a reduction in health expenditure hence can be used on educational spending. Based on the above proposition, Kofinti et al., (2022) used data from the seventh round of the Ghana Living Standard Survey to demonstrate that disadvantaged households' subscription to Ghana's National Health Insurance Scheme enhances the learning outcomes of their children.

Aside the NHIS coverage of students, there is also some evidence of school based health programme albeit mostly studied in second cycle schools and those at the basic level are delivered by development partners. For example, Brooker et al., (2001) studied the perception of people towards school-based delivery of anthelmintics in Ghana and Tanzania. They found that the programme is perceived to improve the wellbeing of beneficiaries and contributes to their academic performance. There is no evidence in the literature about government support for first aid medication in basic schools. However, Owusu-Addo, (2019) shows that first aid is offered to students in schools to treat minor illnesses, ease pain, and support victims until specialists arrive in Ghana. Perhaps the researcher could find out whether government provides this support or the funding is from internally generated funds.

## 2.8 Concluding Remarks

From the above, it is clear government policies have implications for the academic performance of students. There could also be knock-on effects of one policy targeted at a subset of a whole on another subset. In this regard, there are reports in the literature on the possible effects of the Free SHS policy on basic education. For this thesis, the interest is whether the policy affects governments' provision of input or not.

From the universal literature, the literature on the relationship between government input into basic education and academic performance is not strong but the field is also quite mature. This provides the needed academic foundation for my work in Ghana. From the numerous works of the authorities in the field, I identified the most relevant inputs that influence the academic performance of students at the basic level.

When the framework of the most relevant inputs was applied to Ghana, the existing literature revealed that these inputs are provided by the government but spread very thinly. The insufficiency in the provision means the needed effects may not be achieved. With the above emerging reports of unintended effects of the Free SHS initiative could only mean that these inputs are going to suffer the more. These claims are speculative since no research to the best of my knowledge has investigated the effect of the Free SHS policy on government provision of inputs at the basic level.

Based on the above lacuna in the literature, I asked the research questions: (1) How has the Free SHS Policy affect the supply of teaching and learning inputs from the government, (2) How has the state of input supplies affect teaching and learning and (3) How has the state of input supplies affect students' academic performance?

By answering the above questions, my work is setting the pace in studying the effect of the free SHS Policy on basic education. Aside this, I will be contributing to the larger body of literature by going beyond the demonstrated strong relations between inputs (independent variable) and

performance (dependent variable) to answer the “how” question which is mostly ignored in this field of study.



## CHAPTER THREE

### METHODOLOGY

#### 3.1 Introduction

This chapter outlines the methods of the study area, the research design, sample size, sampling procedure, methods of data collection and the various statistical methods used in the analysis of the different objectives.

#### 3.2 Study Area

The research was conducted in the Akuapem North Municipality, located in the Eastern Region of Ghana. The Akuapem North Municipal Assembly (ANMA) was first established as a District Assembly in 1998 and became a Municipality in 2012. The Municipality is located at the south-eastern part of the Eastern Region about 58 kilometers from Accra on the Akuapem Togo Range. It shares boundaries with the Dangbe West Municipality at the north-east, the Akuapem South District Assembly at the south-east, the Suhum Municipal Assembly at the west, and the New Juabeng Municipal Assembly to the north. It covers a land mass of 75,399 square kilometres and has a current population of 236,483 (anma.gov.gh, 22/10/2022).

Figure 3.1: Map of Akuapem North Municipality



Source: Google maps, 2023.

### **3.3 Research Design**

A research design is defined as “a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings” (Burns and Grove, 2003), and it is required to offer a suitable framework for a study. The research design for this study was a mixed method design incorporating both qualitative – through Focus Group Discussions and Key Informant Interviews, and quantitative methods - through the administering of questionnaires. Data for the study was gathered from three groups of people. These were students, teachers and head teachers from the selected schools within the Akuapem North Municipality.

The Focus Group Discussions were used for the teachers, the Key Informant Interviews were used for the head teachers and the questionnaires were used for the students. Data was collected from a total of two hundred and sixty-four (264) respondents from eight (8) Junior High Schools within the municipality. Out of the two hundred and sixty-four respondents, two hundred and forty were students, twenty were teachers and four were head teachers.

Both qualitative and quantitative methodologies were used in this study because either of them were not sufficient enough in capturing all the requisite information needed to adequately answer the research questions that the study sought to provide answers to. In light of this, questionnaires, Key Informant Interviews and Focus Group Discussions were used to gather the information needed for this research.

### **3.4 Sampling**

A stratified random sampling procedure was used to select the schools and respondents for the survey. Stratified random sampling is a probabilistic sampling procedure where the population is divided into strata, and the aim is to group the population into important categories which are important for the purposes of the study. Afterwards, a simple random sample is drawn from

each stratum. This type of sampling procedure is used when the sects of the strata are seen to be very important or unique to the researcher for the study.

In this study, the population was divided into two strata namely the rural and urban sects within the Akuapem North Municipality. This was done because both the rural and urban sects within the municipality have unique features that are relevant for this study and the sample had to be as representative as possible. Furthermore within each strata, there was an advance grouping done to sort them on the basis of mission schools and district or municipal assembly schools. After these divisions, then a random sample was drawn to choose two (2) schools from these four (4) stratum to get the schools to be interviewed.

Table 3.1 estimates the diverse respondents within the study population.

*Table 3.1: Sampling Frame*

Name of Respondents	Sample Frame	Sample Identification
Pupils	240	<ul style="list-style-type: none"> <li>- Register of pupils in Akropong Anglican JHS 1-2</li> <li>- Register of pupils in Akropong M/A. JHS 1-2</li> <li>- Register of pupils in Larteh Presby JHS 1-2</li> <li>- Register of pupils in Larteh M/A JHS 1-2</li> <li>- Register of pupils in Kwamoso Presby JHS 1-2</li> <li>- Register of pupils Saforo M/A JHS 1-2</li> <li>- Register of pupils in Yensiso Methodist JHS 1-2</li> <li>- Register of pupils in Mampong Nkwanta M/A JHS 1-2</li> </ul>
Teachers	20	<ul style="list-style-type: none"> <li>- List of teachers in Akropong Anglican JHS</li> <li>- List of teachers in Larteh M/A JHS</li> <li>- List of teachers in Kwamoso Presby JHS</li> <li>- List of teachers in Mampong Nkwanta M/A JHS</li> </ul>
Head teachers	4	<ul style="list-style-type: none"> <li>- Head teacher in Akropong M.A. JHS</li> <li>- Head teacher in Larteh Presby JHS</li> <li>- Head teacher in Saforo M/A JHS</li> <li>- Head teacher in Yensiso Methodist JHS</li> </ul>

Source: Author's Construct, October 18, 2022.

Following the sampling process, 240 elementary school students, 20 instructors (five from each school), and 4 head teachers made up the sample for this survey. A summary of the sample distribution is shown in Table 3.2.

*Table 3.2: Distribution of Study Respondents according to School Type*

Participants	Urban Mission Schools (2)	Urban Assembly Schools (2)	Municipal Schools	Rural Mission Schools (2)	Rural Assembly Schools (2)	Municipal	Total
Pupils	60	60		60	60		240
Teachers	5	5		5	5		20
Head Teachers	1	1		1	1		4
<b>Total</b>	<b>66</b>	<b>66</b>		<b>66</b>	<b>66</b>		<b>264</b>

Source: Author's Construct, October 18, 2022.

### 3.5 Instrumentation

There are a number of instruments for gathering data from the field and the selected instruments used in gathering data for this study were questionnaire and interview guides. These tools were assigned to different categories of respondents in order to retrieve the right responses for the benefit of this study.

### 3.6 Sources and Type of Data

The study incorporated both primary and secondary data. Primary data were retrieved using face-to-face interviews, Focus Group Discussions and self-administered questionnaires directly from the students, teachers and head teachers while the secondary data were retrieved from the Ghana Education Service - Akuapem North Municipality, the selected school class registers, academic records, stock and property registers.

Also, both qualitative and quantitative data was collected for the study. The primary qualitative data was collected using Focus Group Discussions, and Key Informant Interviews. The quantitative data was also collected through the administering of questionnaires. The

questionnaires were administered to the students in the eight schools to gather answers on the specific information needed for the purposes of the study. Thirty (30) students were selected from each school with fifteen students from each level (JHS1 – JHS2). Support in terms of translating the questions into the local dialect was offered to students who had difficulties in understanding some questions.

Different types of interview were used for different types of respondents. Four (4) Key Informant Interviews were used in sourcing data from head teachers from four out of the eight schools and a Focus Group Discussion was used for the other four schools in sourcing data from teachers. This meant that schools where Focus Group Discussions were conducted did not have a Key Informant Interview and vice versa. Both the Key Informant Interviews and Focus Group Discussions helped to gather in-depth information on the current state of investment received from the government and how it affected teaching and learning.

### **3.7 Analysis of Data**

The field data after collation, were reviewed to be able to identify questions that were not answered or partially answered. Then the open ended questions were assigned codes in order to be able to make it readable by the data analysis software package. The codes were entered into the SPSS Software version 26. After both data were generated, the data was analyzed using descriptive statistics which includes frequency distributions, percentages, and means. The responses from the Focus Group Discussions and Key Informant Interviews were transcribed and coded using the MaxQDA software. The transcripts were summarized into meaningful formats and the results were interlinked with the results from the quantitative analysis for interpretation and discussion.

### **3.8 Variable Description and Measurement**

#### **3.8.1 Academic Performance**

The dependent variable academic performance was measured by the terminal results of the respondents from JHS One and JHS Two.

The independent variables are food provision, school construction, pedagogical materials, teacher quality and quantity, and integrated school health.

#### **3.8.2 Food Provision**

The provision of food was measured by the availability of the School Feeding Programme and the number of days students benefited from the programme.

#### **3.8.3 School Construction**

The independent variable of school construction was measured by the availability of classroom blocks, library, staff common room, ICT lab and a canteen.

#### **3.8.4 Pedagogical Materials**

The pedagogical materials were measured by the availability of teaching and learning materials and how frequent these materials were received.

#### **3.8.5 Teacher Quantity and Quality**

Teacher quantity and quality was measured by the number of teachers in the school and the subjects allocated to them. The quality of the teachers is also measured by the academic qualifications of the teachers as well as their techniques of teaching.

#### **3.8.6 Integrated School Health**

The integrated school health variable was measured by the availability of health facilities or any measure taken to provide first aid to students and teachers in the school.

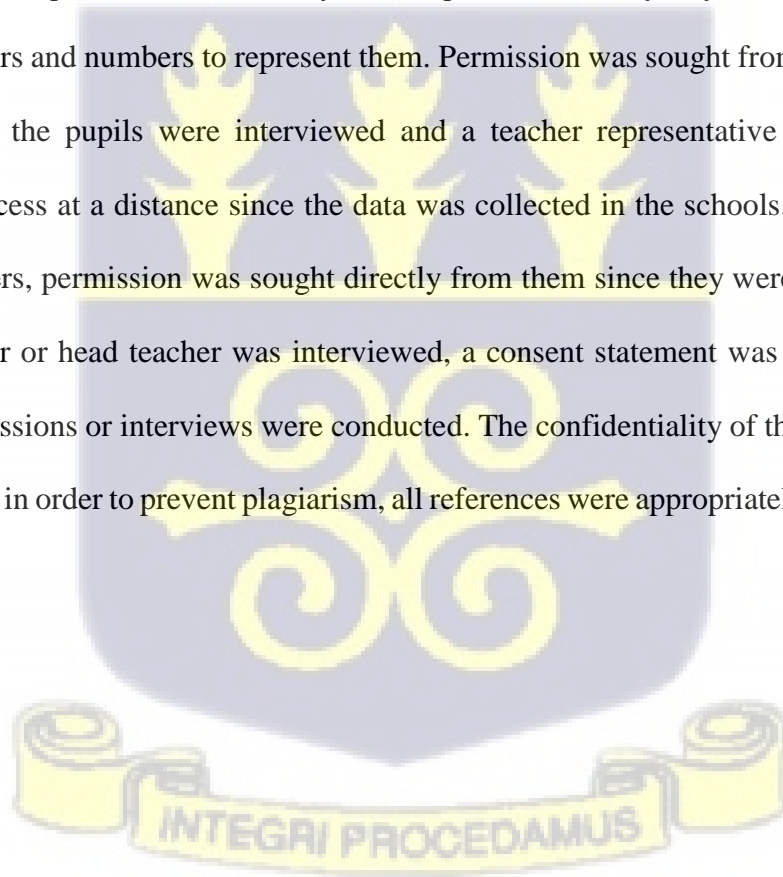
### **3.9 Apriori Expectation**

Based on the above discussion, the theoretical and conceptual frameworks for this study, the following are the expectations of the study.

1. The rate of government's investment into the basic education sector is expected to decline.
2. The teaching process is expected to be affected negatively.
3. The learning process is expected to be affected negatively.
4. Academic performance is expected to decline.

### **3.10 Ethical Considerations**

Ethical standards were upheld to ensure sensitivity in collecting and presenting the data. During the data collection process for this study, the respondents' anonymity was upheld by using pseudo characters and numbers to represent them. Permission was sought from the school head teachers before the pupils were interviewed and a teacher representative was assigned to oversee the process at a distance since the data was collected in the schools. For the teachers and head teachers, permission was sought directly from them since they were above 18 years. Before a teacher or head teacher was interviewed, a consent statement was read out to them before the discussions or interviews were conducted. The confidentiality of the responses were maintained, and in order to prevent plagiarism, all references were appropriately acknowledged.



## CHAPTER FOUR

### DATA ANALYSIS AND DISCUSSION

#### 4.1 Introduction

This chapter aims at presenting and discussing the findings obtained from the data collected concerning the effect of the Free SHS policy on government's investment in Basic Education in Ghana and how it affects academic performance within the Akuapem North Municipality based on the five inputs conceptualized for this study.

The first section of this chapter describes the demographic characteristics of the respondents, the second section presents findings on the state of input supplies on the five inputs namely school building construction, pedagogical materials, teacher quality and quantity, provision of food and integrated health services. The third section presents findings on the effect of the current state of inputs on teaching and learning. The findings on the effect of the inputs on academic performance is also presented in the fourth section and finally, the fifth section presents findings on the perception of respondents on whether the implementation of the Free SHS has affected government's investment into basic education or not.

#### 4.2 Demographic characteristics of respondents

##### 4.2.1 Age and sex of respondents

The 240 respondents who participated in this study were sampled from Akropong M/A JHS, Akropong Anglican JHS, Larteh Presby JHS, Larteh M/A JHS, Mampong Nkwanta M/A JHS, Yensiso Methodist JHS, Saforo M/A JHS, and Kwamoso Presby JHS. Out of the 240 pupils surveyed, 107 of them were males making up 44.6% and 133 of them were females making up 55.4%. The age distribution of the respondents confirmed all students to be of school going ages since the oldest pupil was 19 years old and the youngest pupil was 12 years old however with the oldest pupil, it is seen that his education has been delayed since by 19 years, he is supposed to be at the SHS level. The average age of the pupils was 14.2 years old.

#### **4.2.2 Means of getting to school and the duration**

The study investigated the various means the pupils used to get to school and how long it took them to get to school. This is because the study wanted to have a fair idea of the effort pupils put in to get to school. Out of the 240 pupils, 170 pupils making up 70.8% walked to school, 50 pupils making up 20.8% picked a car to school, 18 pupils making up 7.5% either walked or picked a car to school, and 2 pupils making up 0.8% rode a bicycle to school. On the duration they get to school, it was noticed that 34.7% spent 1-10 minutes to get to school, 27% spent 11-20 minutes to get to school, 15% spent 21-30 minutes to get to school, 13.3% spent 31-40 minutes to get to school, 9.2% spent 41-50 minutes to get to school and 0.8% spent 51-60 minutes to get to school. The mean score for the minutes pupils walked to school was 16.05 minutes, the minutes people sat in a car to school was 19.50 minutes and the mean score for the minutes pupils rode bicycles to school was 18.33 minutes. This indicates that on an average, students who walked to school spent approximately 16 minutes to walk to school, those who came by car spent approximately 19 minutes to get to school and those who rode bicycles spent approximately 18 minutes to school.

#### **4.2.3 Caregiver**

The study also investigated who was responsible for the educational needs of the pupils whether it were their actual parents, other relatives or their caregivers this is because the living arrangements of the pupils can affect their academic performance (Adane 2013). The results indicates that out of the 240 pupils, 118 pupils constituting 49.2% said their fathers were the ones who takes care of their educational needs, 72 pupils constituting 30.0% said their educational needs were taken care of by their mothers, 31 pupils making up 12.9% said other relatives takes care of their education needs, and 19 pupils making up 7.9% said their educational needs were taken care of by their caregivers. This indicates a fair distribution between fathers and mothers as far as supporting their children's educational needs is concerned.

#### **4.2.4 Educational Level of Caregivers**

Research proves that the level of education of parents or caregivers is significantly associated with the educational achievement of their children. According to Anamuah-Mensah et. al., (2007), parents who are educated are likely to value the education of their children more, and this is proven through them buying their books and other learning materials, as well as assisting them with their assignments and home learning.

The results indicate that, out of 240 the pupils, 117 pupils (48.8%) had their caregivers educated up to the basic level, 75 pupils (31.3%) had their caregivers educated up to the secondary level, 35 pupils (14.6%) had their caregivers educated up to the tertiary level, and 13 pupils (5.4%) caregivers were uneducated. The study wanted to investigate if there were any distinct characteristics between schools in the rural and urban areas, as well as mission and municipal assembly schools hence the schools were grouped according to their geographical location as well as their ownership and control. Disaggregating the schools into rural and urban schools, the results on educational level indicated that majority (83.2%) of the caregivers of pupils in the rural areas were educated up to the basic level and majority (31.3% and 48.8%) of the caregivers of pupils in the urban areas were educated up to the secondary and tertiary levels respectively. It is evident that, caregivers of pupils in the rural areas have lower educational levels as compared to caregivers of pupils in the urban sect of the municipality.

#### **4.2.5 Occupation of Caregivers**

Usually, the occupation of caregivers is used to measure their socio-economic status, and it is indicative that caregivers in formal sector occupations are likely to have higher incomes and the same applies to caregivers with occupations in the informal sector all things being equal. Pupils who have their caregivers in formal sector occupations have a higher chance of owning textbooks, and also engaging in extra classes which is likely to have a significant impact on academic performance. Also, caregivers with occupations in the formal sector are more likely

to play active roles in their wards education in terms of assignments, monitoring, and even participating in the PTA and its activities (Avotri, Owusu-Darko, Eghan and Ocansey, 1999).

The study therefore enquired about the occupation of the caregivers under this consideration.

The response on the occupation of caregivers revealed a wide range of occupations however it was dominated (73.5%) by informal sector occupations which include farming, petty trading, carpentry, masonry, driving among others. The formal sector occupations that were captured were banking, teaching, nursing and engineering. A percentage of 5.7 were also unemployed. Upon disaggregating the caregivers into those in the rural and urban sect of the municipality, it was revealed that majority of the caregivers in the rural areas were either farmers (51.4%) or petty traders (40.8%), and the caregivers in the urban areas had a significant number (65.0%) of them engaged in occupations in the formal sector.

#### **4.3 The effect of the Free SHS Policy on the supply of teaching and learning inputs from the Government**

The first objective of this study was to investigate how the Free SHS Policy has affected the supply of teaching and learning inputs from the government within the Akuapem North Municipality. The findings of this study are therefore presented to address this objective.

How has the Free SHS Policy affected the supply of teaching and learning inputs from the government?

The inputs considered for this study include school building construction, teacher quantity and quality, pedagogical materials, provision of food and integrated school health services. We discuss this in turn.

##### **4.3.1 School building construction**

The teachers and head teachers were asked about the infrastructure in their individual schools and whether there had been any new construction done in the school between 2017 – 2022.

Four (4) Key Informant Interviews and four (4) Focus Group Discussions were conducted,

totaling eight (8) interviews for the eight (8) selected schools. Out of the eight interviews, six (6) said there had not been any new construction in their schools at the given time. Two (2) said there had been new constructions in their school however, it was not a government project. That said, it meant that all eight schools did not benefit from any new construction funded by the government. Table 4.1 shows the current availability of infrastructure in the eight schools.

Table 4.1: Availability of infrastructure

Infrastructure	KII 1	KII 2	KII 3	KII 4	FGD 1	FGD 2	FDG 3	FDG 4
Classroom	Yes*	Yes	Yes*	Yes	Yes	Yes	Yes	Yes
Staff Common Room	Yes	Yes	No	Yes	No	Yes	Yes	Yes
Library	Yes*	Yes#	No	Yes#	No	No	No	Yes#
ICT Lab	Yes*	Yes#	No	Yes	Yes	Yes*	No	No
Science Lab	No	No	No	No	No	No	No	No
Workroom	No	No	No	No	No	No	No	No
Toilet	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Urinal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: Field Survey, 2022.

Yes: Available

No: Not Available

Yes\* : Available but not funded by the government

Yes# : Available but not furnished

Findings revealed that all the schools had classroom blocks to accommodate the students though the classroom blocks of two schools were not funded by the government. Also, all the schools but two had staff common rooms, the other two shared space with their head teachers. Out of the eight schools, only four had a library and out of the four, one was funded by an NGO. Two out of the three funded by government had the space but did not have books for the space. The final school which had books in the library shared the space with an ICT Lab. It was also noticed that none of the schools had science labs or workrooms for the pupils to have their practical exercises since under the new curriculum, basic schools are mandated to engage the pupils more in practical sessions. In the case of a toilet and urinal, it was noted that all the schools had both

a toilet and urinal facility except one school which did not have a toilet because of the unavailability of land space to build one hence the pupils go to the toilet facility of their primary school which is across the road when they need to use the facility. All these facilities were built before the FSHS programme.

The respondents were asked if they had made any request in terms of the needed infrastructure for their schools and the response from all the interviews indicated that they had. One interviewee expressed that:

*“I don't know of any basic school even around that a construction is currently going on there. We even wrote something to get funding and the feedback I am getting is that now the attention is at the SHS level and some special schools.”*

From the above analysis, it can be deduced that although these schools have classroom blocks, they do not have the needed auxiliary infrastructure to aid in the teaching and learning process and since all these inputs have implication on academic performance, the unavailability of the above stated infrastructure impedes on participatory learning and can affect academic performance negatively (Clark, 2010).

The pupils (240) within the eight selected schools were also asked to rank the state of specific structures in their schools and Table 4.2 reveals that in the 8 schools, 31.7% of the pupils rated their classroom blocks to be acceptable. On the part of the library too, 41.7% of the pupils ranked their libraries to be poor. In the case of the ICT Labs, 30.4% of the pupils rated it to be acceptable. 44.2% of the pupils also rated their workrooms to be poor. As far as the urinal and toilet is concerned, 40.4% and 37.1% of the pupils respectively rated them to be poor. 39.2% of the pupils rated their hand wash station to be poor and finally 42.9% of pupils rated their canteen as very good. It can therefore be deduced from the above findings with the exception of the canteen that appears to be in a good state, all the other structures are mostly not in a good state. All these structures in the eight schools were built years before the inception of the FSHS programme and it is time for the structures to undergo maintenance however no sort of maintenance has been effected on the structures especially the classroom blocks. Five out of

the eight schools had their classrooms without ceilings whereas two of the school blocks had not been painted for over five years.

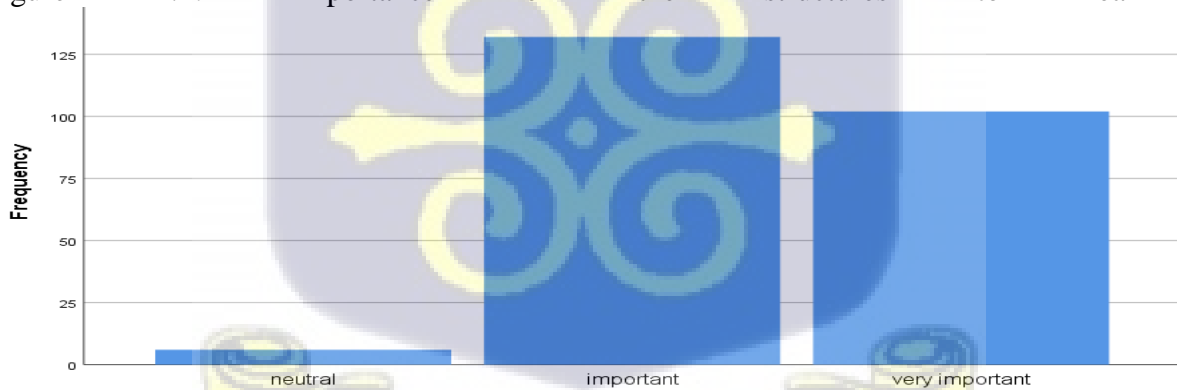
Table 4.2: State of infrastructure in schools

Structure	Very Poor		Poor		Acceptable		Good		Very Good	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Classroom Block	8	3.3	47	19.6	76	31.7	70	29.2	39	16.3
Library	35	14.6	100	41.7	23	9.6	47	19.6	35	14.6
ICT Lab	43	17.9	73	30.4	25	13.4	56	23.3	43	17.9
Workroom	88	36.7	106	44.2	14	5.8	20	8.3	12	5.0
Urinal	36	15.0	97	40.4	47	19.6	55	22.9	5	2.1
Toilet	70	29.2	89	37.1	35	14.6	38	15.8	8	3.3
Handwash Station	62	25.8	94	39.2	32	13.3	45	18.8	7	2.9
Canteen	28	11.7	53	22.1	47	19.6	103	42.9	9	3.8

Source: Field Survey, 2022.

The pupils were further asked if the stated structures were relevant for learning or not and their response is tabulated in Figure 4.1.

Figure 4.1: Importance of the structures to learning



Source: Field Survey, 2022.

From Figure 4.1, it is seen that out of the 240 pupils, 6 pupils (2.5%) were indifferent about the importance of the structures to learning whereas 132 pupils (55.2%) stated that the structures were important for learning and 102 pupils (42.5%) stated that the structures were very important for learning.

Findings from the literature stated that structures at the basic education level has not improved significantly (Ghana Education Service, 2021) and findings gathered from the field confirms this stance as none of the schools had benefited from any new structure or maintenance yet since 2017-2022. It can therefore be deduced that the stated structures above are important for learning, which also means that the state of the structures has implications on learning hence academic performance, and in the case where the state of the structures in these schools are rated to be acceptable, it means academic performance is likely to be affected due to its state.

#### **4.3.2 Teacher quantity and quality**

The interviewees were asked if the number of teachers were adequate for their school. Out of the eight schools, six said they had enough teachers, and two otherwise. A teacher from one of the two schools which did not have enough teachers noted:

*“I will say no because of this new curriculum. We have new subjects, we have creative arts, career technology and none of the teachers were trained in that field so we are struggling to teach. We do not have people who have much insights in these subjects, so it is the old ones that are putting their heads together to help teach those subjects.”*

The last interviewee who is a head teacher was indifferent with his response. He also expressed that:

*“I would say yes and no, because with Pre-Tech, Mathematics and Science, we do not have, we are double streamed and we have only one person taking science and we have one for Pre-Tech. So each teacher takes either two or two and a half. We are double streamed so they add one class of another to each grade.”*

From the above findings, it can be said that most of the schools within the municipality have enough teachers for their schools and with the case of those who do not, they have found a way to teach with the available teachers. On the other hand, to understand the dynamics of teacher quality, students were asked questions relating to their teachers in terms of their school attendance, teaching skills and how they use teaching resources in lesson delivery. The results are shown in Table 4.3.

Table 4.3: Teacher attendance

Response	M/A Schools		Mission Schools	
	Frequency	Percent	Frequency	Percent
Sometimes	4	3.3	2	1.6
Often	45	37.5	44	36.7
Very often	71	59.2	74	61.7
Total	120	100.0	120	100.0

Source: Field Survey, 2022.

Table 4.3 reveals that in the M/A schools, 3.3% respondents said teachers sometimes come to school, 37.5% stated that teachers came to school often and 59.2% said their teachers come to school very often. In the mission schools as well, it was seen that 1.6% respondents said teachers sometimes come to school, 36.7% stated that teachers came to school often and 61.7% said their teachers come to school very often. In light of this, it can be deduced that teachers in these basic schools attend school very often. According to the M/A and mission schools also, it is seen that there is no large difference between teachers' attendance to school. For teachers to teach, they must be present in school hence the findings on teacher attendance depicts that teachers are available to perform their roles required of them. From the head teachers however, it was noticed that teachers' attendance rate had not changed both before and after the implementation of the FSHS programme.

In the section of teacher quality also, respondents were asked of their level of understanding when they are being taught, how teachers encourage them to study and the extent to which teachers prepare them for examinations and their responses are presented in Table 4.4.



Table 4.4: Frequency on teacher quality factors

Teacher Quality	Very Poor		Poor		Acceptable		Good		Very Good	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Level of Understanding when Taught	2	0.8	6	2.5	56.0	23.3	130	54.2	46.0	19.2
Encouragement from Teachers	-	-	3	1.3	39	16.3	132	55.0	66	27.5
Preparing Pupils for Exams	1	0.4	4	1.7	36	15.0	154	64.2	45	18.8

Source: Field Survey, 2022.

It is seen from Table 4.4 that, as far as their level of understanding when being taught is concerned, 130 pupils representing the majority (54.2%) stated that the teachers' effort to ensure that they understood what they were being taught was good. 132 pupils representing the majority (55%) also stated that the level of encouragement from teachers to study was good. On the part of teachers preparing the pupils for exams also, 154 pupils representing the majority (64.2%) said that the level of preparation from teachers for exams was good. From these findings, it can be deduced that the teachers in these schools do a good job in ensuring that the pupils understand what is being taught, preparing them for exams as well as encouraging them to learn. This means that the efforts of teachers should result in the good academic performance of students however, the issue raised by teachers was that since they did not receive the needed materials in teaching, although they attended school frequently, the output was not as compared to when they were using the old curriculum. They stated that during the pre FSHS era, they had timely access to TLMs which helped them to teach better.

Exercises and assignments also play a crucial role in teaching as it helps the teacher to know whether the pupils have understood what was taught or not (Stiggins and Chappuis, 2011). As a result, respondents were asked how often their teachers gave exercises and assignments and the findings are presented in Table 4.5.

Table 4.5: Frequency on exercises and assignments

Teacher Quality	Never		Seldom		Sometimes		Often		Very Often	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Exercises	-	-	1	0.4	12	5.0	132	55.0	95	39.6
Assignments	1	0.4	5	2.1	64	26.7	104	43.3	66	27.5

Source: Field Survey, 2022.

The data presented in Table 4.5 shows that 132 respondents representing the majority (55%) stated that they were given exercises often, and 95 respondents (39.6%) stated that they were given exercises very often. No respondent said their teachers never gave exercises. This reveals that the teachers give exercises often. On the part of assignments too, 104 respondents representing 43.3% stated that they were given assignments often, 66 representing (27.5%) said they were given assignments very often, and 64 representing (26.7%) stated that they were sometimes given assignments. It can therefore be deduced that teachers give assignments often as well. Initially, the textbooks that the teachers conducted the exercises and the assignments from were mostly from the old curriculum since they had not received textbooks for the new curriculum. This is to indicate that before the FSHS period, teachers used the appropriate textbooks for conducting exercises and assignments however, they still had to use the old curriculum after the introduction of the new curriculum (the inception of the FSHS) because they had not yet received the new textbooks.

Earlier findings from the literature suggested that the number of teachers at the rural areas is lower than the number of teachers at the schools in the urban areas however, findings from the field did not indicate a such a disparity as one school from both the rural and urban areas stated that their teachers were not enough so they had to improvise. It was also seen from the field that the teacher to student ratio in the schools in the rural areas were not so distinct from that of the urban areas, as the average number of students in schools in the rural area is 33 students whereas the average number of students in the urban areas is 30 students. It can be deduced from all the

findings that on the average, the number of teachers are enough for the schools. All these findings add up to the quality level of the teachers to prove that the teachers in these basic schools on the average are of good quality although they are handicapped because of the delay and insufficient supply of teaching resources.

### 4.3.3 Pedagogical Materials

The teachers and students were questioned on the pedagogical materials in their schools which includes desks, TLMs, and other instructional materials. Table 4.6 reveals the results from the teachers through both the Key Informant Interview and Focus Group Discussions.

Table 4.6 : Results from KIIs and FGDs on pedagogical materials received from the government from 2017-2022

Materials	KII	KII 2	KII 3	KII 4	FGD 1	FGD 2	FDG 3	FDG 4
1								
Desks	No	-	No	No	No	No	No	No
Textbooks	-	-	-	-	-	-	-	-
Computers	No	No	No	No	No	No	No	No
Stationery	-	-	-	-	-	-	-	-
Teaching and Learning Resources	No	No	No	No	No	No	No	No

Source: Field Survey, 2022.

- + : Yes and enough
- : Yes but not enough
- No : No have not received

Results in Table 4.6 shows that, out of the 8 schools, only 1 school had received desks from the Municipal Assembly but even with those, the respondent stated that they were not enough. Also, all the schools confirmed that they had received textbooks for the new curriculum, and all of them expressed that they were delayed and not enough. Upon the feedback and observation, some schools had just received textbooks for the new curriculum that was implemented four years ago. In terms of computers also, it was recognized that none of the schools had received

computers from the government in the space of five years. All the 5 schools that had ICT labs got their computers from either NGOs or individual sponsors.

The results also indicate that all the schools confirmed that they received stationery from the government however, it is usually not enough and they do not receive these stationery on time. As far as teaching and learning resources for practical lessons are concerned also, all the schools said they did not receive these resources from the government within the stated period however, some schools purchase these resources with part of their capitation grant, some teachers buy them themselves, and others contact individual sponsors to help. Disaggregating the schools between rural and urban sects, it was noticed that their location did not affect how they received inputs from the government.

Also, it was revealed that schools in the rural areas got the support of NGOs more than the schools in the urban areas. Upon further classification of the schools into Mission and Municipal Assembly schools, it was revealed that 3 of the mission schools out of 4, received both financial and non-financial support from their churches.

From the foregoing analysis, it can be deduced that none of the schools had received desks, computers and teaching and learning resources from the government from 2017-2022. All the schools confirmed that they had received textbooks and stationery from the government within the stated time however, all the respondents complained that these inputs they received delayed and were not enough. Since these inputs are all crucial for academic performance, it can be reasoned that the unavailability and inadequacy of these educational inputs can affect academic performance negatively.

The pupils were also asked how available textbooks were for their personal use, as well as how often teachers used textbooks and visual aids when teaching and the results are displayed in Table 4.7

Table 4.7: Crosstabulation of the use of pedagogical materials

		Ownership and Control			Geographical Location		
Response		Mission	Assembly	Total	Rural	Urban	Total
Teacher's textbook	Never	1	1	2	1	0	1
	Seldom	1	2	3	0	2	2
	Sometimes	10	18	28	18	20	28
	Often	72	70	142	62	56	138
	Very often	36	29	65	39	42	71
Total		120	120	240	120	120	240

		Ownership and Control			Geographical Location		
Response		Mission	Assembly	Total	Rural	Urban	Total
Learner's textbook	Never	7	9	16	14	6	20
	Seldom	23	26	49	27	22	49
	Sometimes	54	62	108	56	60	116
	Often	31	20	51	20	27	47
	Very often	5	3	8	3	5	8
Total		120	120	240	120	120	240

		Ownership and Control			Geographical Location		
Response		Mission	Assembly	Total	Rural	Urban	Total
Visual aids	Never	1	2	3	2	2	4
	Seldom	2	8	10	3	6	9
	Sometimes	60	49	109	70	30	100
	Often	47	58	105	42	72	114
	Very often	10	3	13	7	6	13
Total		120	120	240	120	120	240

Source: Field Survey, 2022.

It is revealed from the data presented in Table 4.7 that in terms of teachers' use of textbooks, majority (60% and 58% respectively) of the respondents from the mission and MA schools stated that their teachers used textbooks often. In terms of the rural-urban sect also, it was seen that 52% and 47% of the students respectively indicated that their teachers used textbooks often.

On the part of student's access to textbooks also, 45% and 52% of the respondents respectively from the mission and MA schools stated that they had access to textbooks sometimes. In terms of the rural-urban sect also, it was seen that 47% and 50% of the students respectively indicated also that they had access to textbooks sometimes.

Concerning visual aids too, according to the mission and MA school classification, it was noticed from the respondents that majority of the teachers in the mission school representing 50% used visual aids sometimes whereas 48% of the MA teachers used visual aids often. In the case of the rural-urban classification also, it was seen the majority of the pupils representing 58% in the rural area used visual aids sometimes whereas majority of the pupils representing 60% in the urban area used visual aids often. It can therefore be deduced that teachers in the urban area usually use visual aids in teaching often as compared to teachers in the rural areas within the municipality.

The findings from the literature presented a general understanding that there was a report on the inadequacy of the supply of teaching and learning materials by the Ghana Education Service in 2012. (Oppong Frimpong, 2022) also followed up on the issue in 2021 and noticed that there was no improvement in the supply of teaching and learning materials by the government to the basic schools. Findings from the respondents also confirms the fact that there is an inadequacy in the supply of pedagogical materials to the basic schools. In fact from reports from the interviews, it can be seen that the frequency of supply has also declined. It can therefore be deduced that the state of the supply of pedagogical materials by the government to the basic schools is inadequate and has declined over time. The new curriculum requires the use of a lot of visual aids and teaching resources therefore the need for an increased investment into these resources rather than a decline.

#### **4.3.4 School Feeding**

The head teachers, teachers and students were asked if their schools were enrolled on the School Feeding Programme and all of the schools said they were not enrolled because the programme does not cover the JHS level. Three (3) of the schools that had their primary level enrolled on the programme said that the caterers were not coming any more hence even at the primary level, they were no more benefitting from the School Feeding Programme. The respondents stated

that during the COVID 19 era, the government introduced school feeding for the pupils at the JHS level popularly called the ‘one hot meal’ and according to them, it helped a lot. One of the key informant expressed that:

*“I experienced school feeding a little after the COVID break at the JHS, you see at the JHS, they made it mandatory to supply them with school feeding at that time when they asked them to come back to school. And if you look at the attendance rate of students, it tells you that these students have a special way of identifying a special meal they want, and they will never miss it. So if you actually want to do some activity that you think you would have to get all of them, I think sometimes, nicodemously you fix it around the time that they will never want to miss that meal.”*

Another key informant who has their school enrolled on the programme expressed his sentiments saying:

*“The primary is receiving free feeding but when it comes to form one to form three, there's no support. They're left in the middle like that and for most of them, because most of them are a little bit grown, they're left to fend for themselves. So some of them have to drop out of school to do one or two things and then come back.”*

A key informant when asked if school feeding encouraged the pupils to learn stated that:

*“Yes, because most of our kids are either not being given money or, sometimes small amount of money is being given to them, so, in the presence of them, when the food was coming, it was supporting them in such a great way as far as learning is concerned.”*

From an FGD when the teachers were asked if school feeding had implications on attendance, enrolment and academic performance, a teacher replied saying:

*“With attendance I will say not too much, but with academic performance I will say yes, because most of the kids depended on it as their lunch, since most of the parents do not give them money for food.”*

On the same question, a key informant who heads a basic school expressed her sentiments saying:

*“The School Feeding Program was an intervention to improve enrolment in schools. And since they are no more doing it, most of the students have stayed back home. They're not coming because for some of them, it was their source of livelihood. They know when they come to school they'll definitely get food to eat, but now that they're not getting the food, there's no need for them to come.”*

Another key informant when asked if school feeding had a positive effect on learning answered saying:

*“Sure. You can't come to school without anything and expect to achieve whatever, it is not possible. You need to feed the stomach before you can be able to assimilate. Some of them will come to school without food. Some of them we notice that they are suffering from attention deficits and this is because they are hungry.”*

From a FGD, when asked about the condition of the pupils' feeding, one teacher expressed his sentiments saying:

*“You know, sometimes, students will come to school and most of them won't get food to eat at home. They will have to go back home when it's break. Those that do not have anything in the house too have to rely on the teachers. Sometimes you are there, someone will come and, they will ask, ‘Sir please, could you give me 2 cedis?’ You know, it's very sad. You can't watch the child go hungry like that, so you would have to help.”*

From the above analysis, it can be deduced that school feeding gives teachers an advantage as far as executing their roles as teachers is concerned. Also, upon experience from the teachers and head teachers, school feeding has a positive effect on school attendance and performance. In light of this, it can be said that the absence of the school feeding programme at the JHS level is likely to affect academic performance in a negative way.

The pupils were also asked if they were able to study when they were hungry or satisfied to validate the response gathered from the FGDs and KIIs and their responses are presented in Figure 4.2.

Figure 4.2: Ability to study when hungry

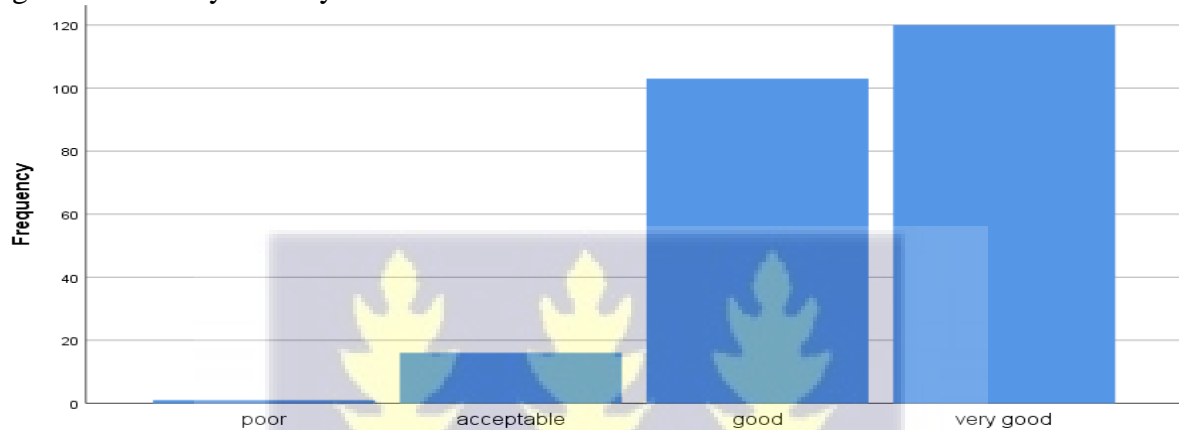


Source: Field Survey, 2022.

The data presented in Figure 4.2 reveals that out of the 240 respondents, 28 respondents representing 11.7% said that their level of concentration when they were hungry was very poor, 98 respondents representing 40.7% stated that their level of concentration when hungry was

poor, 66 respondents representing 27.5% said their level of concentration was acceptable, 46 respondents representing 19.2% said their level of concentration was good and 2 respondents representing 0.8% said that their level of concentration when they were hungry was very good. This comes to confirm the response from the teachers that the average level of concentration of pupils when hungry is poor. The respondents were also asked if they were able to concentrate when they were satisfied and their response is presented in Figure 4.3.

Figure 4.3: Ability to study when satisfied



Source: Field Survey, 2022.

Figure 4.3 reveals that out of the 240 respondents, 0.47% stated that their level of concentration when satisfied was poor, 6.7% said their level of concentration when satisfied was acceptable, 42.9% said their level of concentration was good and 50% said that their level of concentration when they were satisfied was very good. Numerous work from the literature has proven that there is a positive relationship between the School Feeding Programme and school enrolment, cognitive performance and retention all over Ghana (Salifu et al., 2018; Milledzi et al., 2017; Aliu and Fawzia, 2014; Owusu Gyasi et al., 2018; Konzabre, 2018; Abdul – Kudus, 2011; Tagoe, 2018; Odame, 2014). Responses gathered from the field also validates the fact that students are able to learn and concentrate when they are satisfied. This means that the absence of the provision of food in these schools has the potential of affecting the cognitive capacity of pupils in the case where they are not well nourished.

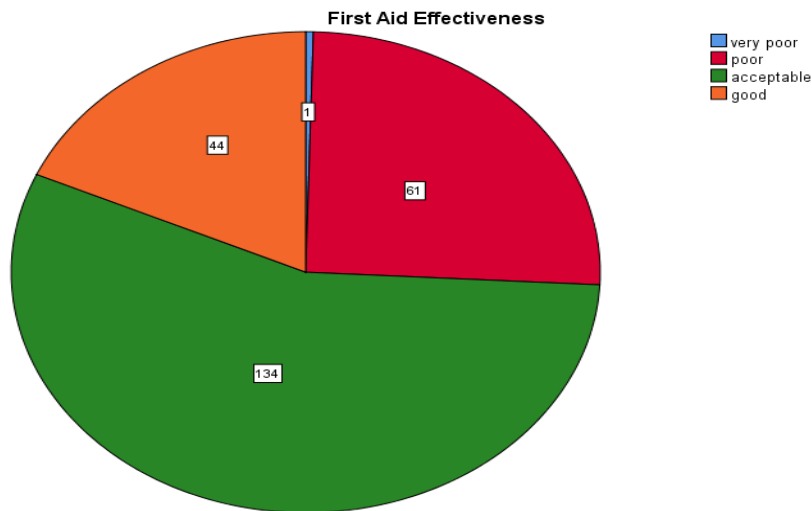
#### 4.3.5 Integrated School Health Services

Out of the eight interviews, it was gathered that none of the schools had a sick bay however, seven of the schools had a first aid box which was stocked with first aid materials such as methylated spirit, gentian violet, plasters, bandages etc. It was revealed that oral drugs are not to be administered at the primary and JHS level hence, they are only allowed to administer first aid for cuts and other injuries. According to the teachers, when the pupil falls sick in school, they either tell the person to go home or in the case where it is an emergency, they call the parents of the pupil while they take that pupil to the nearest clinic.

Also all the schools but one had a urinal and toilet which are important factors regarding the WaSH programme. All the schools had a place to wash their hands although they were not in good condition. The literature found no evidence in whether government provided the first aid medications to the school and the findings on the field revealed that the medications were bought by themselves using the capitation grant or any money became available to them.

From the above, it can be said that health care at the JHS level has not been integrated into the school system yet hence nothing regarding health has been received from the government. Health care is essential even at the Junior Level since it engages a number of pupils for approximately eight hours. The health of the student determines whether he or she can learn or not hence not having a good health service in the basic schools can affect academic performance in a negative way. In order to investigate the effectiveness of the administration of first aid in the various schools, pupils were asked how effective first aid was administered in their schools and their answers are presented in Figure 4.4.

Figure 4.4: First aid effectiveness



Source: Field Survey, 2022.

From the data displayed in Figure 4.4, 0.4% rated the effectiveness of first aid administration as very poor, 25.4% rated the effectiveness as poor, 55.8% rated it as acceptable, and 18.3% rated it as good. This reveals that respondents saw the administration of first aid as acceptable. Since the next highest is 25.4% representing poor, it is important that the schools take first aid seriously as it has direct implications on learning, understanding and school attendance.

#### 4.4 The effect of the state of input supplies on teaching and learning

This section presents results on how the current state of input supplies have affected teaching and learning in the eight schools. Responses were collected from the head teachers using Key Informant Interviews, teachers using Focus Group Discussions and students through the administering of questionnaires. Table 4.8 shows how the state of input supplies has affected teaching and learning.



Table 4.8: The effect of the state of input supplies on teaching and learning.

Subject	KII 1	KII 2	KII 3	KII 4	FGD 1	FGD 2	FGD 3	FGD 4
English	-	-	-	?	-	-	-	-
Mathematics	?	-	?	?	-	-	-	-
Science	-	-	-	-	-	-	-	-
ICT	-	-	-	?	-	-	-	-
Home Economics	-	-	-	-	-	-	-	-
Pre – Tech	-	-	-	-	-	-	-	-
Career Technology	?	?	-	?	?	-	-	?

Source: Field Survey, 2022.

- + : Positive effect
- : Negative effect
- ? : Indifferent

Findings revealed a strong level of negative impact of the state of input supplies on teaching and learning especially in the core subjects; English, Mathematics and Science. With English, responses from all eight except one stated that the state of input supply affected teaching and learning negatively. The other respondent was indifferent because the school found a way to improvise for the inputs that were not available however the respondent agreed that should they not have improvised, then the current state would have had a negative effect on teaching and learning. The common concern for the English language was that the students were to have textbooks and other audiovisual resources to help them understand the subject very well. Five out of eight indicated that the current state of input had a negative effect on mathematics because, most of the students perceive Mathematics to be a very difficult subject therefore they do not give their all in studying the subject, hence the need for teaching and learning resources to arouse their interest in the subject. One key informant when asked what the subjects the pupils found most difficult answered that:

*“Their difficult one I will say is mathematics and it is as a result of children not participating, they having the fear that mathematics is very difficult. That is one of the reasons they always perform low.”*

The findings also revealed that all of the respondents stated that the current state of inputs affected teaching and learning in a negative way. They complained that science is a technical subject hence the need to engage in a lot of practicals for the pupils to really understand and have first-hand knowledge about some specific topics of the subject. A few topics that were mentioned were electric circuit, osmosis and diffusion, and solutions. The responses on the other subjects also revealed a high negative impact of the state of input supplies on teaching and learning and during the FGD, one teacher expressed his concern that:

*“It is very sad teaching ICT, you know, ICT is very practical. So when you teach the child on the marker board, you know, we are all not good in artistry. So it's not every teacher, I know for sure that, the teacher who handles ICT, he's not good at drawing and all that. And let's assume you want to teach Microsoft Word, you know, you have to draw the window, let the child know the window. But then you can't draw that on the board. Yes. So we do not have an ICT lab and it's affecting teaching.”*

From the foregoing analysis, it is evident that the state of input supplies is affecting teaching and learning negatively. This means that there is a high possibility that academic performance will also be negatively affected since the teaching and learning process has already been affected.

To be more specific, the respondents were asked the state of the inputs as classified by this study and the responses collected are discussed below.

#### **4.4.1 The effect of the state of school building construction on teaching and learning**

This section presents the findings on the effect of certain school infrastructure and how it affects teaching and learning.

##### *Workrooms*

After the respondents answered that they did not have workroom for practicals, the respondents were also asked how the unavailability of workrooms for practicals affected teaching and learning and one respondent from the FGD expressed that:

*“When you see the theory aspect is done again in practical, it helps the kids to pick it very fast, know what they are doing, but it is only the theory that they always do. So if you tell somebody, types of frying, we have shallow frying, we have deep frying and, the*

*child doesn't practice it to know the quantity of oil to use for the deep frying, the learning is incomplete.”*

The general impression was that students were able to understand better when they engage in practical lessons.

### *Library*

Out of the eight schools interviewed, only one school had a well-furnished library and even that, it was a new facility that was constructed for them by an NGO. The other three were not in a good condition, and the remaining four did not have a library at all. When asked if the state of the library affected teaching and learning, one key informant expressed that:

*“You know, it affects us in a negative way, in the sense that there should have been a library for our children to go there and read. But we don't have the library. So during library time, instead of the children getting story books and other school books to read, we rather have to let them concentrate on their notes to read. So one way or the other, the effect of them not having the library is seen.”*

Another key informant whose school does not have a library so they keep their books at the office stated that:

*“We don't have a school library. Here are the books, this is where we keep them. When it's time for library, they come to the office and convey them to the various classrooms, then bring them back, and as a result of that, we are losing most of our books.”*

During a FGD, a teacher in one of the rural schools also made an interesting submission saying:

*“We do not have a library. Even personal textbooks that the kids are supposed to have, we don't have.”*

The above findings reveal that schools without effective workrooms, science labs, ICT labs, and libraries are handicapped in various ways. A good workroom is relevant especially now as the new curriculum suggests that the teaching and learning process be more practical than theoretical. An effective library is relevant as it goes a long way in helping to improve the reading skills of pupils. It also serves as a secure storage for textbooks and other books. Concerns from the literature in relation to school building construction focused on the issue of the number of school building constructions being insufficient however, findings from this study revealed that even though the schools had classroom blocks, they were not sufficient for

teaching and learning as other structures that are unavailable are equally necessary for teaching and learning.

#### **4.4.2 The effect of the state of pedagogical materials on teaching and learning**

This section presents findings on how the state of pedagogical materials affected teaching and learning and the results are presented below.

##### *Textbooks*

During the interviews, teachers were asked how timely they received textbooks and all the respondents stated that they did not receive textbooks on the new curriculum on time. They were further asked how the situation affected teaching and learning and one of the teachers stated that:

*“For, J.H.S. (form 1) we do not have textbooks and teaching and learning resources for the new programme. For form two, the textbooks for the new curriculum are not sufficient. For teachers, we also struggle to get some of the textbooks to gather enough information to deliver to the learners and because of that, effective teaching and learning is not assured.”*

All the interviews confirmed that the school had received textbooks from the government. The only issue they had was the fact that they were not enough and they were not supplied on time. The teachers however found a way to teach since they had access to the softcopies of documents regarding the new curriculum.

Findings from the literature revealed a report from the Global Education Monitoring Report Team (2022) indicating the fact that in all the schools that they visited, they saw the absence of textbooks for the new curriculum and the findings from the field confirms that statement since interviewees confirmed that they did not receive the textbooks early. The schools presently have some textbooks for the new curriculum though they are not sufficient.

### *Desks*

On desks, teachers and head teachers were asked how the current state of desks affected teaching and learning and all responses indicated that the availability of desks had a positive effect on the teaching and learning process. One key informant expressed that:

*“Yes, last term or about two or three terms ago, I used to have about three students sitting on a mono desk. How can you conduct any meaningful assessments? Unless one sit and does, finishes with his or hers before the other person also will come and take over and looking at it, it makes the work very difficult. Because something that you could have just move in and done it once, like let's say you want to conduct a class test, you could have just moved in, done it once, but because of lack of desks, some would sit and finish, then the others will also come and do it after the first group is done.”*

Another key informant explained the challenges they were facing before an NGO came to their rescue and he stated that:

*“A chair that is supposed to take only one child, we have two children and a desk that is supposed to be two children, we have about sometimes three or four, and it makes teaching difficult. Yeah, there is no space. Even when they are about to write, because they are more on the table, writing is difficult for them so it wasn't something that was very good.”*

In addition to the above, on the issue of desks and how it affected teaching and learning, a key informant also stated their challenges saying:

*“It affects teaching and learning because for Junior High at this stage, you know, we should have one student to one desk. But we still have some dual desks that student pair and then sit on it. They copy, it's not helping but that's what we have, so we are managing what we have. If we go strictly about the things we have now, it will get to a time we will not even enrol new students into the school. But they said we should open our doors for everybody to come to school. So we are doing same.”*

From the above findings it can be deduced that unavailability of desks for students has a negative effect on teaching and learning since sometimes, it takes longer than usual to conduct assessments. The same situation also encourages the habit of copying among students. In addition to these, students are also unable to write effectively since their pairing limits the movement of their hands while writing.

USAID acknowledges the negative effects teaching and learning materials have on academic performance hence are increasing their support in that area as published in the Daily Graphic

(2/9/2022). Also in the literature, Baidoo-Anu (2018) in his research ranked teaching and learning materials as the second factor in influencing students' academic performance in the southern part of Ghana. Results from the field confirms that the inadequate supply of pedagogical materials affects teaching and learning and since it is ranked as the second factor that affects academic performance in the southern part of Ghana where the Akuapem North Municipality is located, it reveals the relevance of pedagogical materials on teaching and learning.

#### **4.4.3 The effect of the State of School Feeding on Teaching and Learning**

All the eight schools did not benefit from the school feeding programme though three schools had their primary schools enrolled in the programme. However, due to the school feeding provided by the government to the JHS when school resumed after the COVID break, all key informants spoke to the impact it made as far as teaching and learning was concerned. All respondents appreciated the fact that students could not assimilate well what was being taught when they were hungry. One of the respondents from the FGD expressed that:

*“You know, learning is one of the things that drains energy. So you would have to get more food to keep yourself going. So when the child is hungry, definitely he's not going to perform.”*

A key informant on the same matter stated that:

*“Yes, because most of our kids are either not being given money or, maybe a small amount of money is being given to them, so, in the presence of them, when the food was coming, it was supporting them in such a great way.”*

The findings above confirm the findings of Aurino et. Al (2010) when they conducted a randomized evaluation on Ghana's nationwide school feeding programme that resulted in an improvement in the average exam performance of pupils who benefited from the programme. Earlier findings also suggested that providing students with free meals went a long way to improve the cognitive capacities of pupils as they have been well nourished. The findings gathered from respondents also validated that when students are well nourished, their ability to learn and retain is heightened, which can result in the improvement in academic performance

of pupils as established by Aurino et. al (2010). Another part to the school feeding was the ability of the programme to improve on the enrolment and attendance rate of pupils and the findings gathered from respondents through the teachers confirmed that when they benefited from the one hot meal initiative, it resulted in the schools recording high attendance from students. Head teachers who had their primary schools enrolled on the programme confirmed the fact that the programme had a positive impact on enrolment and attendance rates.

#### **4.4.4 The effect of the state of teacher quality and quantity on teaching and learning**

It was discovered in all the eight schools that all the teachers were graduates from recognized teacher training colleges in the country hence they had been trained to execute the teaching roles effectively. It was also revealed from the interviews that six schools had enough teachers, one school responded that they did not have enough teachers since the introduction of the new curriculum required some level of knowledge and expertise to teach certain subjects, for example career technology. The other school out of the eight said that they did not have enough teachers for some subjects, specifically Integrated Science and Pre- Technical skills and since they are double streamed, they had to take on more classes than usual. From the above situation, it can be deduced that all the selected schools had to manage their teachers to ensure that the teaching and learning process is not stalled.

The interesting situation discovered was the fact that although the teachers were in good capacity to teach, the unavailability of teaching and learning inputs rendered most of them handicapped hence they had to improvise with what was available. One head teacher remarked when asked how they teach topics that requires practicals saying:

*“We improvise. If we need to bring some from our homes, they bring from their homes. Sometimes we need to borrow from other private schools and other things. And if you don't have or we don't get, we just keep the topic and move on.”*

A respondent from the FGD also replied to the same question indicating that:

*“For teachers, in fact we struggle to get some of the textbooks to gather enough information to deliver to the learners. In fact, we are handicapped. Because of that, effective teaching and learning is not assured.”*

Another key informant also stated that:

*“For us in the JHS, every subject goes with its own teaching and learning materials. But for that one, for the school per se, we don't have any, it is teachers who provide their teaching materials.”*

Another teacher also stated that:

*“So, in respect to teaching and learning materials, I wouldn't lie, we do not have much. Most especially those of us at the remote areas. So most of the times you would have to improvise and with those that you cannot improvise, you have to buy them yourself.”*

Some were also unperturbed since they were going to use the resources available to them and not worry too much over the situation because it is not their problem to solve. During the FGD, one teacher commented on this matter saying:

*“We would have to use what we have. That's the only option. We can't kill ourselves.”*

Also, although the teachers are trained and qualified teachers, they are unable to effectively perform their roles as teachers since they do not have enough teaching and learning materials to help facilitate the teaching and learning process which has a negative effect on teaching and learning.

#### **4.4.5 The effect of the state of Integrated Health Systems on teaching and learning**

From the KIIs and FGDs, it was revealed that the basic schools are not allowed by the GES to administer oral drugs to the students since they do not have a sick bay in the schools where a professional health personnel will be charged to oversee the health status of the pupils. They can administer first aid to pupils in the case of cuts, falls, and other injuries. When asked the current state of the first aid box, all eight interviews revealed that they had the first aid box but the items in the box were not sufficient. One key informant indicated saying:

*“We only get first aid when it's time for sports. Even with that it's just some ointments and some few stuff, bandage and things. In case any eventuality should happen right now, we have to send the person to the clinic or hospital.”*

When asked if the situation was different before 2017, the respondents stated that they used to receive the capitation grant earlier than they are now. And also since items were not so

expensive, they could buy the essentials at the beginning of the term. One key informant addressed the question saying:

*“We could buy enough items at the beginning of the term since all the teaching and learning materials were usually received on time. Because of this, money that we would use to buy registers and lesson notebooks, we could use them to buy the first aid items as well as other stuff water, t-rolls and the rest.”*

Findings from the literature revealed the relevance of school based health programmes in the second cycle schools on the academic performance of the beneficiaries Brooker et al.(2001). This suggests that an improved health system at the basic level also has the potential to affect academic performance positively.

From the above reports, it can be analyzed that the government basic schools do not have sick bays rather first aid boxes which is somewhat furnished to cater for injuries and because of the absence of sick bays, it means that pupils who are not well would have to stay home till they get better which will affect their learning. Before the inception of the programme however, it was seen that schools could furnish their first aid box immediately at the beginning of the term. Drawing from the analysis of the School Feeding Programme, it can be construed that when pupils are not well, the tendency of them coming to school because they would get treated would be higher which will go a long way to improve attendance. In the case of parents who cannot afford health services too, they will be less burdened.

#### **4.5 The effect of the state of input supplies on students’ academic performance**

This section presents results from the respondents concerning how the current state of input supplies have affected the academic performance of students. Data were collected from head teachers, teachers and students in the eight selected Junior High Schools within the study population.

Table 4.9 shows how general academic performance has progressed over the catalogued years.

Table 4.9: Level of Academic Performance of Students from 2017-2022

Interview	Response
KII 1	-
KII 2	?
KII 3	-
KII 4	-
FGD 1	-
FGD 2	-
FGD 3	-
FGD 4	-

Source: Field Survey, 2022.

- + : Increasing
- : Decreasing
- ? : Indifferent

From Table 4.9, it is seen that out of the eight interviews, seven responses indicated that the general academic performance of pupils have declined, and the other respondent stated that on one side academic performance has increased while on the other side academic performance has declined. When probed further to know the possible reasons for the decline, one key informant stated that:

*“I don't really know because the teachers are doing their best and one of the reason I will say is because of the free SHS, they are just going. With aggregate 40 the person will get a school, 45 the person will get. So it is not helping the children to learn. They will say if I even get grade 50, I'll get a school. So they're not learning and really, really, really, they'll get that grade and they'll get a school. So they're not learning.”*

Another key informant also replied saying:

*“The reason being that we lack so many things like the desks that they even sit on to learn, the labs, no ICT lab, no science lab. So they lack the practical aspect of the topics and the lessons, and then parenting. Some of them will come to school without food so they will be suffering from attention deficits. They'll be in the class but they're not here.”*

Response from another key informant stated that:

*“The performance have been declining. Yes. I don't know the actual cause that I would say that it is, but it has been declining. The students, I don't know but they are not serious these days.”*

To add up to the above responses, another key informant replied to the question saying:

*“When you compare the performance before 2017 to now, I will say they were doing better than now. Because of lack of resources and other materials, had it not been for the PTA that is helping the various schools, it would have been difficult.”*

From the above responses, it is clear that the reason for the decline in academic performance of pupils varies. Although the assumed factors were proven as factors affecting academic performance, there was an interesting discovery that since there was no cut off point for the Free SHS Programme, students were not motivated to study. This adds up to the effect of the Free SHS on the academic performance of pupils at the JHS level. Other factors that were revealed were about how parents were not supporting teachers to make teaching and learning easy for both the students and teachers.

Data was collected from pupils as well concerning academic performance and the findings are presented according to their form, the schools’ geographical location (rural and urban) and the sect on ownership and control (mission and municipal authority). As explained earlier, the further grouping of the schools was done to investigate if there were any distinct features pertaining to their location as well as ownership and control.

Table 4.10: Mean score of pupils on the core subjects according to their forms.

Form		Mathematics Score	Science Score	English Score
1	Mean	46.20	57.72	50.97
	N	105	105	105
2	Mean	40.59	51.34	49.31
	N	105	105	105
Total	Mean	43.42	54.56	50.14
	N	210	210	209

Source: Field Survey, 2022.

Out of the 240 respondents, it was revealed that pupils from 1 school had not received their exam papers for the academic year therefore they could not state their marks hence the population for this section was reduced to 210 respondents. From the data presented in Table 4.10, it is observed that the average score of students in mathematics was 46 marks, science was 58 marks and English was 51 marks for the form ones. The grading for these scores are D+ (7), C+ (5) and C (6) respectively which is not a good score using the grading system. On the

part of the form twos, it is seen that there is a decline in the academic performance of students. It is observed that the average score of students in mathematics was 41 marks, science was 51 marks and English was 49 marks for the form twos. The grading scores for them also are D+ (7), C (6) and D+ (7) respectively and this depicts a low performance per the grading system. The decline in performance from form one to form two can be used as a forecast to state that academic performance from students when in form three might get worse.

The state of the supply of teaching and learning inputs and the academic performance of students confirm the fact that the state of teaching and learning inputs has an impact on students' academic performance.

Table 4.11: Mean score of pupils on the core subjects according to their geographical location.

Geographical Location		Math Score	Science Score	English Score
Rural	Mean	41.83	50.38	52.69
	N	90	90	90
	Std. Deviation	12.374	10.860	10.467
	Sum	3765	4534	4742
	Minimum	10	22	18
	Maximum	89	70	74
Urban	Mean	44.61	57.69	48.23
	N	120	120	120
	Std. Deviation	14.161	13.168	14.665
	Sum	5353	6923	5788
	Minimum	20	18	4
	Maximum	85	88	92

Source: Field Survey, 2022.

The data presented in Table 4.11 displays the scores of pupils using the rural-urban classification and it is seen that the mean scores of pupils in Math, Science and English in the rural areas are 41.83, 50.38, and 52.69 respectively. That of the pupils in the urban areas are also 44.61, 57.69, and 48.23 respectively. Looking at the minimum and maximum marks, it proves the figure for the standard deviation as the marks are widely separated thereby affecting the mean score of the pupils however, from the data collected, it was seen that majority of the pupils in all three subjects scored between 50-60 marks. From the above, it is observed that

comparing the average scores of schools along the lines of geographical location, pupils in the urban areas did better in mathematics and science than the pupils in the rural areas whereas the pupils in the rural areas did better in English as compared to students in the urban areas. The scores however are not widely differentiated as the average difference in marks is by four points. Upon these findings, it can be deduced that there is no wide difference between the scores of students in the rural areas and the students in the urban areas within the municipality at the time of the study.

Table 4.12: Mean score of pupils on the core subjects according to their ownership and control.

Ownership and Control		Maths Score	Science Score	English Score
Mission	Mean	40.64	52.98	48.21
	N	90	90	90
	Std. Deviation	11.871	13.403	11.816
	Sum	3658	4768	4339
	Minimum	10	22	15
	Maximum	82	88	80
Assembly	Mean	45.50	55.74	51.59
	N	120	120	120
	Std. Deviation	14.240	12.128	14.008
	Sum	5460	6689	6191
	Minimum	14	18	4
	Maximum	89	84	92
Total	Mean	43.42	54.56	50.14
	N	210	210	210
	Std. Deviation	13.464	12.733	13.191
	Sum	9118	11457	10530
	Minimum	10	18	4
	Maximum	89	88	92

Source: Field Survey, 2022.

The data presented in Table 4.12 displays the average scores of pupils along the lines of whether the school is a mission school or a municipal assembly school and it is seen that pupils from the MA school did better in all core subjects than the mission schools although the difference in marks is not a lot. It was identified that one of the mission schools did not give out the examination papers and report cards to students therefore the population instead of 120 reduced to 90. Perhaps the absence of the scores from one school affected the scores and the comparison.

From the standard deviation figures also, it is seen that the individual scores of students are not clustered around the mean score which represents diversity in the marks. During the interviews, it was realized that mission schools received extra help from their associated churches than the MA schools however, it did not affect their academic performance as seen in Table 4.16. It can therefore be deduced that the type of school whether mission or MA does not have any substantial impact on the academic performance of pupils.

The pupils were asked which subject among the core subjects was very difficult for them and 66.6% said mathematics was difficult, 18% said science was difficult and 15.4% said English was difficult for them. When probed why the subject was difficult for them, the common response was because it was hard to understand. The level of understanding of the students rather did not reflect in their scores since all three subjects recorded similar scores. It can therefore be deduced that the perception of students on the level of difficulty of a subject did not affect their results in those subjects.

#### **4.6 The effect of the Free SHS Programme on Government's Investment into Basic Education**

This section presents results on whether the implementation of the Free SHS Programme has affected government's investment into basic education and if yes, what ways it has been affected. This response was gathered from just that head teachers through KIIs and teachers through FGDs. Figure 4.5 indicates whether respondents believe the Free SHS Programme has affected government's investment into basic education or not.

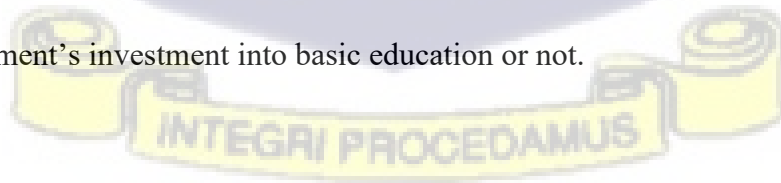
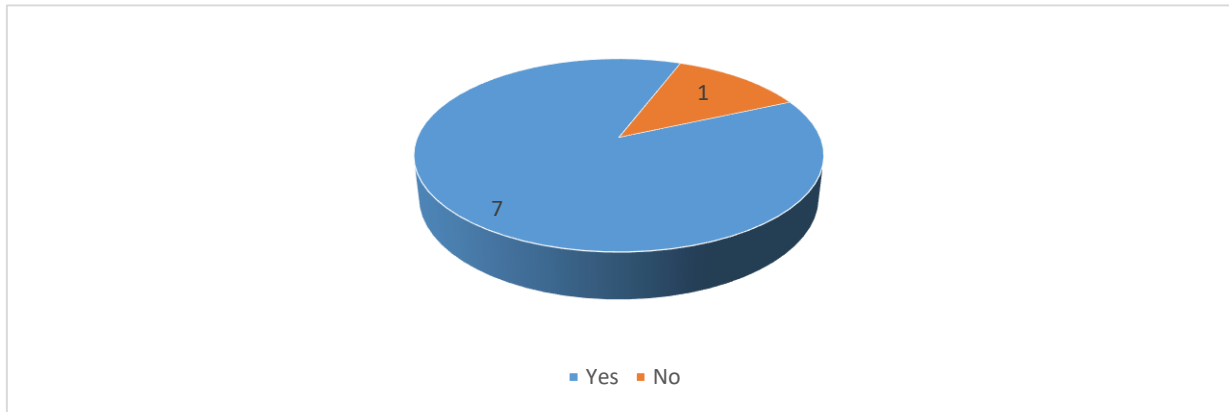


Figure 4.5: The effect of the Free SHS Programme on Government's Investment into Basic Education



Source: Field Survey, 2022.

Figure 4.5 shows that out of the eight interviews, seven interviews stated that they believed that the implementation of the Free SHS Programme has affected government's investment into basic education whereas one interview indicated that they did not believe that the implementation of the programme has affected government's investment into basic education since even before the implementation of the programme, the manner whereby government does not provide teaching and learning inputs timely and adequately has been the same.

One key informant indicated that:

*"Free SHS is something I personally support, but I think the attention have been shifted to that place leaving those of us at the basic level. And I think government should also take a second look at it."*

Another key informant also indicated saying:

*"Yes, because with the free SHS, even feeding one person is expensive, then feeding a whole lot of students. The government is pumping money into the Free SHS and I think that is the reason why the Junior High Schools and the Primary Schools, we are not getting the help we used to get at first, from 2017 to this year."*

Another response from a key informant was that:

*"Yes, because I think now the attention in terms of monetary is shifted to the SHS. And so maybe that is what is delaying the capitation to be coming because we base on that to even buy our markers, and all those things and because it doesn't come like that, they have to provide the materials and the school is also not having any means of income."*

The consistent phrases that were used by respondents was that government's concentration was on the SHSs neglecting the primary and JHS. Their grievance was not to stop the programme

rather, their plight were that concentration should also be given at the basic level since they are the foundation for the SHSs.

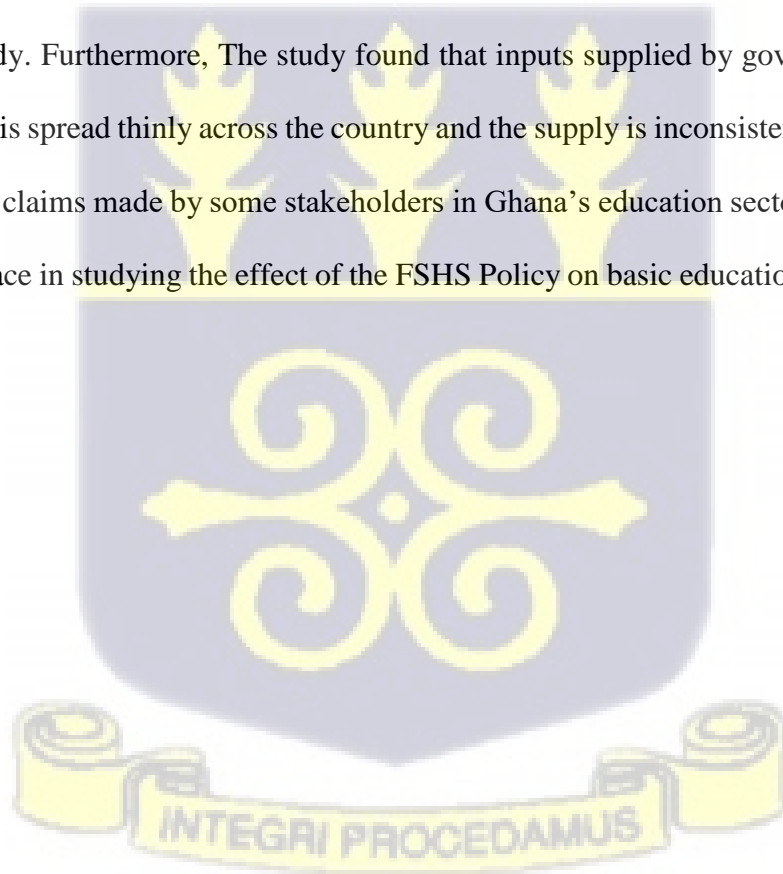
From the above information, it can be analyzed that as far as the teachers at the basic level is concerned, the implementation of the Free SHS Programme has affected government's investment into basic education and as a result, teaching and learning has been affected resulting in a decline in academic performance of students at the basic level. Findings gathered from the field also reflect that indeed government's investment into basic education from 2017 to 2022 has reduced. This validates the issue of an unintended knock on effect of the Free SHS Programme on government's neglected responsibilities in supplying teaching and learning inputs at the basic level since scarce resources are been channeled to the SHS in order to sustain the programme as posted on myjoyonline.com on April 12<sup>th</sup>, 2022.

#### **4.7 Conclusion**

The chapter presented the findings gathered from the head teachers, teachers and pupils from KIIs, FGDs, and the administering of questionnaires respectively. The chapter began with the discussion on the demographic characteristics of the pupils, then it proceeded to the data analysis and findings on the state of the five teaching and learning inputs. It was revealed that from the year 2017 to 2022, there had been a decline in the provision of these teaching and learning inputs by the government. Then it went on to discuss the findings whether the current state of inputs affected teaching and learning, which was proven that the current state of teaching and learning inputs affected teaching and learning negatively. Afterwards, the findings on whether the state of teaching and learning inputs affected academic performance was discussed and results revealed that academic performance has been declining as a result of the state of these inputs plus other additional factors which includes parenting. Finally, the chapter presented findings on whether the Free SHS Programme affected government's investment into basic education, and it was seen that the teachers believed that the programme had affected

government's investment into basic education negatively which had a ripple effect on academic performance. The response of the pupils was used to validate the response of the teachers where necessary.

The study contributes to knowledge in five ways. To begin with, the study exposes the issue of a policy-knock on effect of the FSHS Policy on government's investment into basic education focusing on the Junior High Schools. Also, although literature suggests a weak relationship between government investment and pupils' academic performance, this study rather reveals a strong relationship between government's investment and pupils' academic performance in the study area. In addition, the study contributes to the larger body of literature by answering how teaching and learning inputs affect pupils' academic performance which is mostly ignored in this field of study. Furthermore, The study found that inputs supplied by government towards basic education is spread thinly across the country and the supply is inconsistent and inadequate which confirms claims made by some stakeholders in Ghana's education sector and finally, the study sets the pace in studying the effect of the FSHS Policy on basic education particularly the JHS.



## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

The previous chapter presented the results of the effect of the Free SHS Programme on government's investment into basic education and how it affects academic performance in the Akuapem North Municipality through eight selected Junior High Schools. This chapter points out the main findings of this study as well as presents the conclusions on the study, and the implications of the findings of the study. It also provides recommendations on how best to mitigate the effect of the Free SHS Policy on government's investment into basic education in order to improve the academic performance of pupils at the JHS level in the Akuapem North Municipality.

#### 5.2 Summary of Findings

In this section, we summarize the key findings per the objectives and the conceptualized inputs.

##### 5.2.1 The effect of the Free SHS Policy on the supply of teaching and learning inputs from the Government

The first objective of the study was to find out the supply of teaching and learning inputs post the implementation of the FSHS programme and the findings we discuss these in turn.

###### *School building construction*

Findings from the literature revealed that there were 5406 basic schools under trees which school building constructions had to be constructed for them (Ghana Education Service, 2021).

All the basic schools surveyed had classroom blocks although there was not an even distribution of auxiliary infrastructure in terms of libraries, computer labs among others.

On the field, it was gathered that in all the eight schools that none of them had received any funding for the construction of any structure by the government from 2017 to date. One school

which had a fresh classroom block was funded by an NGO. Other two schools who were putting up a structure were funded by the PTA and other individuals, and per enquiry, it was understood that the structures were halted because of inadequate funding. In terms of some relevant school structures, it was identified that out of the eight schools, 4 schools did not have a library, 3 had a library but was not well furnished, and the one that had a well-furnished library was not funded by the government. In the case of an ICT Lab, 3 schools out of the eight did not have an ICT Lab, 2 had a working ICT Lab, 2 had an ICT Lab but not well furnished, and 1 had a well-furnished ICT Lab which was not funded by the government. All the eight schools did not have a science lab, as well as a workroom for practicals. 7 out of 8 schools had a toilet and all 8 schools had a urinal. Ratings from the students on the available structures in the school on a likert scale of 1-5 averagely rated their classrooms 3, their ICT lab 2, their library 2, their science lab and workroom 0 since they did not have one, their toilet 2, urinal 2, and their hand wash station 2.

Classifying the schools into rural and urban schools, it was realized that the schools in the urban areas had libraries and ICT labs although they were not well furnished whereas the schools in the rural areas had no libraries and ICT labs. Classifying the schools into mission and M/A schools also, it was noticed that some of the mission schools had the advantage of sharing some facilities including washrooms and church halls with their associated churches whereas the M/A schools did not have that opportunity.

Reflecting on the issue of school under trees and the budget allocation directed into the FSHS programme, it is evident why none of the schools have benefited from any new infrastructure funded by the government over the stated period since their focus as stated by the GES is to eliminate the schools under trees. The fact that the state of the available structures in the schools are in an acceptable state is a problem on its own since the structures need to be maintained as

soon as possible. This is the reason the schools within the municipality solicit funds and support from external sources for any construction or infrastructure that is needed in their schools.

### *Pedagogical materials*

Findings from the literature stated the issue of the inadequacy of teaching and learning materials in basic schools in the country (Oppong Frimpong, 2021). On the issue of textbooks specifically, the Global Education Monitoring Report Team, (2022) reported that in all the basic schools that they visited, there was the absence of textbooks for the new curriculum. Data gathered on the field revealed that on the part of textbooks and other stationary, all eight schools had received some quantity from the government within the stated time. The issue was that they were not enough for effective teaching and learning. Also out of the eight schools, seven schools had not received desks from the government within the stated period, and the other school that received desks was from the municipal assembly through the common fund. None of the schools had also received computers and other teaching and learning inputs from the government within the stated period.

The findings from the field data confirms the findings from the literature on the part of the inadequacy of the teaching and learning materials supplied from the government from 2017-2022. On the report from the Global Education Monitoring Team also, their report cannot be dismissed even though all the schools had confirmed that they received textbooks from the government. This is because at the time the data was gathered, some schools had just received some of their textbooks for the new curriculum and were hoping the rest would follow soon. The key informants stated that although teaching and learning materials were not received on time over the years, from 2018 to date, the delay in receiving these materials were too long therefore they had to purchase some of these materials (registers, lesson notebooks etc.) themselves or improvise with available exercise books till they are received.

Findings from the data gathered also revealed that some of the mission schools received support in cash and kind towards teaching and learning materials whereas the M/A schools did not have that advantage. It was also noticed that both rural and urban schools received donations occasionally however, schools at the rural area of the municipality received frequent help from NGOs as compared to schools in the urban areas.

#### *Teacher quality and quantity*

Findings from the literature showed that in the last decade, basic school teachers has been increasing (UNESCO Institute for Statistics, 2022). This is true because from the field data, it was discovered that six out of the eight schools had adequate teachers, and with the other two schools that did not have adequate teachers, the head teachers worked around the situation to ensure that no subject was left untaught. This does not say that the teachers in the basic schools are adequate however, the subject has seen an improvement over the years. It was also revealed from the literature that majority of teachers disliked teaching in the rural areas from a survey conducted by GNAT in 2018. The data gathered from the field also confirmed this report as most of the teachers in the rural areas complained about the working conditions and how they struggle to get to school, the unavailability of modern amenities and the issue of them having to support students with money for food although their salary is not enough.

As far as the teacher quality was concerned also, it was discovered from the literature that in the rural central region, one-thirds of the teacher population were untrained however findings from the data gathered revealed otherwise in the Akuapem North Municipality as all the teachers in the eight schools were trained teachers from recognized teacher training colleges in Ghana.

It is therefore seen that the FSHS policy has not affected the supply of trained teachers into the basic schools in the municipality. The issue was that due to the inadequate supply of teaching

and learning materials, teachers stated that they were unable to perform their responsibilities expected of them thereby affecting their quality.

### *School feeding*

From the literature, it was seen that the programme currently covers over 2,600,000 beneficiary pupils in about 9000 schools in all the Metropolitan, Municipal and District Assemblies (Ghana School Feeding Programme 2021). It was noticed from the data gathered that Junior High Schools were not enrolled on the programme however they all benefited for some time from the programme after schools resumed from the COVID break. Every response concerning the SFP was made with their knowledge and experience on the provision of food for the JHS pupils during that time. Also, all the schools which had their basic schools enrolled on the SFP stated that they had not benefited from the programme for the entire term since the cooks were no longer coming with the food, and their reason was the fact that the government was owing them some for a year, others for more than a year. The students at the SHS still enjoy the provision of free food so what is hindering the government from releasing funds for this programme at the basic level? Also the fact that primary and secondary schools are to benefit from free food leaving the JHS is problematic since pupils at the JHS level are younger and cannot manage hunger better than those at the SHS.

### *Integrated health services*

The government schools at the basic level do not have sick bays rather a first aid box and from the interviews, it was identified that all the schools had a first aid box although the items were not frequently stocked. Findings from the literature suggested that the majority of children at school going ages were likely to be insured since about 68.6% of Ghanaian adults are insured. The study did not find out from respondents whether they were insured or not however since they are all adolescents, their level of hyperactivity increases which can cause them to get injured easily while playing. As a result of their hormonal changes too, they can easily fall sick

especially the girls when they are menstruating. It is for this reason and more that even though there is no sick bay currently at the basic schools, the first aid kit will be well stocked to meet the effective health needs of pupils and even teachers.

From the data gathered, it was learnt that the money used to buy these first aid items are taken from the capitation grant and since the amount is not sufficient for more pressing needs, the first aid items are not given much priority as stated by the key informants.

### **5.2.2 The effect of the state of input supplies on teaching and learning**

The second objective of the study was to find out how the state of input supplies affected teaching and learning and we discuss these in turn.

#### *School building construction*

From the literature, Clark (2010) stated that for pupils to actively participate in school, there has to be the existence of facilities and space for discovery learning. The new curriculum also advises teachers to allow for participation and discovery learning. From the data gathered however, it was identified that the schools did not have well-furnished facilities to encourage discovery learning. This affected the effective rolling out of the new curriculum in the various schools. The introduction of the new curriculum came shortly after the implementation of the FSHS programme however funds have been directed into that whereas the requirements for the new curriculum is still in debt. In light of this, it is seen that teaching and learning is affected negatively.

The education sector is a huge sector that requires a lot of funds to be able to make it productive and the government alone cannot fund this sector hence the need to partner with other donor agencies to solicit funds for the efficient running of the sector particularly at the basic level. It was noticed in one of the schools in the rural Akuapem North that an NGO had built and furnished a JHS block, library, ICT lab and staff room for the school and per observation, it

was noticed that the structure was well planned and furnished as compared to the infrastructure at the other schools.

### *Pedagogical materials*

Findings from the literature showed that the delay in supply of teaching and learning materials hampered the smooth running of academic work irrespective of the school type and settlement (Adu-Yeboah, 2020). Findings from the survey also confirmed that since all the teachers complained that the delay and inadequate supply of teaching and learning materials affected the academic process. This made the Global Education Monitoring Report Team to state the urgency in printing NaCCA approved textbooks for the basic schools in order to ensure that the teaching and learning process runs effectively.

The curriculum is the roadmap for teachers as far as executing their roles is concerned and it was evident that the resources needed for the new curriculum were not received in full. For some schools, since the implementation of the new curriculum in 2017, they received textbooks on it last year. They had to improvise to teach the pupils somehow and for some, they did not fully understand the requirements of the new curriculum since the knowledge they had on it is different from what is being implemented by the GES.

Aside textbooks, it was also identified that other instructional materials for practicals that are required for the new curriculum has never been received from the government however, the teachers provide it themselves or they improvise. In the case where they are unable to buy or improvise too, they leave the topic and move on to the next and this is not right for a country pursuing quality education. It is occasionally that donors support some of the schools with these materials which helps improve the service delivery of teachers.

### *Teacher quality and quantity*

The International Task Force on Teachers for Education 2030 reported that governments do not significantly invest in training teachers to give quality teaching experience to the pupils rather

governments are interested in initiatives that increase enrolment and improve access. This report is accurate per the data gathered during the survey. The pupils rated the teaching techniques of their teachers as good however the teachers complained that they did not receive pedagogical materials on time and even when they received them, they were not enough. The teachers pointed out themselves that they were handicapped with pedagogical materials which affected how they teach negatively. A number of the teachers also complained about the fact that they are struggling with the requirements of the new curriculum since they had not received materials for the curriculum. The government is seen to be focused on the FSHS programme neglecting the factors that affect the effective performance of the new curriculum.

#### *School feeding*

Aurino et. al. (2020) stated that providing pupils with food improves their cognitive abilities because they are well nourished. Another study also revealed that there was a positive relationship between the SFP and cognitive performance of pupils across Ghana (Salifu et al., 2018; Milledzi et al., 2017; Aliu and Fawzia, 2014; Owusu Gyasi et al., 2018; Konzabre, 2018; Abdul – Kudus, 2011; Tagoe, 2018; Odame, 2014). Findings from the data gathered revealed that the Junior High Schools were not enrolled on the SFP rather it was the primary and SHS that were enrolled. The teachers confirmed the literature by comparing pupils' attentiveness and participation when they had eaten to when they were hungry. They also explained how the 'one hot meal' for the JHS pupils after the COVID break affected attendance, participation and understanding positively. Findings from the students also confirmed the fact that when they are well nourished, their cognitive abilities are improved. As part of our quest for quality education as a country, then the JHS has to also be enrolled on the programme in order to attain the benefits thereof.

#### *Integrated health services*

Findings from the literature revealed that the wellbeing of pupils just like providing pupils with food, improved their cognitive abilities to learn well Brooker et al. (2001). Pupils can only learn when they are in good health hence the need to ensure that their wellbeing is prioritized. The data gathered revealed that the only means of healthcare at the basic level is the first aid box and none of the schools mentioned that their first aid box was well stocked. The pupils also confirmed that administering first aid in their schools was not so effective. It is high time where health is prioritized at the basic schools but are there funds to support this? It is said that a sound body leads to a sound mind therefore when considering the factors that affect the teaching process, the health service delivery should not be underestimated.

### **5.2.3 The effect of the state of input supplies on academic performance**

The means of verifying the outcome of the teaching and learning process is using the academic performance of pupils. The five stated inputs cumulatively affect the academic performance of pupils.

The current state of infrastructure at the various JHSs is below average and it affects teaching and learning as well as academic performance negatively. As far as pedagogical materials are concerned also, the findings established that there was a positive relationship between pedagogical materials and academic performance hence the inadequate supply of these materials affected academic performance negatively. On the part of teacher quantity and quality also, it was identified that teachers were not effective because of the inadequate provision of teaching and learning input hence it was deduced that the quality of teachers could be seen well when the needed resources are available for teaching and learning. All sects of respondents also proved that feeding had a positive effect on teaching and learning hence the school feeding programme has the potential of increasing enrolment, retention, and academic performance.

Furthermore, it was realized that pupils in the urban areas performed better in mathematics and science than those in the rural areas whereas those in the rural areas performed better in English

than those in the urban areas. Classifying the schools into Municipal Assembly and Mission schools also, it was identified that although all schools had low grades, the M/A schools performed slightly higher than the mission schools.

The teachers of both sects of schools attributed the performance to inadequate teaching and learning resources, and the student's willingness to learn. One of the major concerns of teachers was the fact that since entry into the SHSs did not have any cut off points, the students were not motivated to learn therefore they requested that the GES reintroduces the cut-off points for admissions into the SHS as that would increase their level of seriousness to learn which will increase their academic performance.

### **5.3 Conclusion**

This study sought to investigate the effect of the Free SHS Policy on the supply of teaching and learning inputs from the Government, how the state of input supplies has affected teaching and learning as well as academic performance of pupils and it is concluded that:

On the state of input supplies by the government from 2017-2022, it was noticed from the data gathered that none of the five conceptualized inputs were in a good state. Both the literature and the findings confirmed that there has been delay and decline in the supply of teaching and learning inputs especially from the introduction of the new curriculum which is approximately the same year the FSHS programme began. Since the budgetary allocation of the Ministry of Education is majorly focused on the Free SHS and not addressing the needs of the new curriculum and the general welfare of the basic schools rather decreasing their budgetary allocation, it is concluded that the FSHS programme has caused a decline in government's investment in basic education.

Considering how the current state of input supplies have affected teaching and learning, it was seen that the delay and decline in the supply of teaching and learning inputs had a negative effect on the teaching and learning process. Some teachers confessed that due to the delay in

receiving the teaching materials for the new curriculum, they had forgotten how to go about it. Since the delay in the supply of these inputs is attributed to the knock-on effect of the FSHS programme on basic education, it is concluded that the FSHS has additionally affected the effective running of the teaching and learning process.

Looking at how the state of input supplies have affected academic performance of pupils, it was identified that the inadequate supply of teaching and learning inputs affected academic performance of pupils negatively especially after the introduction of the new curriculum. It revealed that the policy of no cut-off points for admission into the SHS to benefit from the FSHS programme resulted in the poor academic performance of pupils. In light of this, it is concluded that the FSHS programme is a major factor for the decline in academic performance of pupils in the Akuapem North Municipality.

The basic schools can be efficiently managed when the capitation grant is received on time. Findings from the data gathered revealed that the amount for the capitation grant is small and considering the issues of inflation in the country, the money which was initially insufficient is more insufficient now. It is this money that the schools use to purchase some of the essentials needed for the school. The fact that the capitation grant has not been increased for years now can also be attributed to the knock-on effect of the FSHS programme.

#### **5.4 Recommendations**

Based on the study findings, the following recommendations have been made:

##### ***5.4.1 Increase budgetary allocation for Basic Education***

The study recommends that there should be an increase in government's budgetary allocations for the basic schools since the inadequacy of the capitation grant affects academic performance negatively. The funds should also be disbursed in time so that it does not stall the teaching and learning process.

#### ***5.4.2 Invest in Infrastructure at the Basic Schools***

The study recommends that the government through the GES should invest in these structures to effectively facilitate the teaching and learning process. This will help in better understanding and retention of what is taught. It would also help realize the goal of the new curriculum which is to ensure discovery learning and participation.

#### ***5.4.3 Enrol the JHS on the School Feeding Programme***

The study recommends that the government extend the school feeding programme to the Junior High level since the primary and SHS level are beneficiaries of the feeding programme. Pupils benefitting from this would help improve attendance, concentration and the motivation to put in their best while in school.

#### ***5.4.4 Organize a Refresher Course on the New Curriculum***

The study recommends that the GES would organize a workshop for both head teachers and teachers to serve as a refresher course so that every uncertainty concerning the new curriculum would be eliminated. This will go a long way to improve the teaching quality in the basic schools hence an improvement in academic performance.

#### ***5.4.5 Partner with NGOs and Other Stakeholders***

The study recommends that the government would reach out to NGOs, other donor agencies as well as the parents of the pupils to solicit funds to put up infrastructure that will enhance quality education as well as other teaching and learning inputs for an improved academic performance rate.

### **5.5 Conclusion to the Study**

The study revealed how the Free SHS Programme has affected government's investment into basic education and how it affects academic performance in the Akuapem North Municipality. The investments were categorized into five inputs namely school building construction, pedagogical materials, teacher quality and quantity, school feeding, and integrated health

systems. The study elucidated on the current state of the teaching and learning inputs, how it affected teaching and learning as well as how it affected academic performance. Recommendations included increasing budgetary allocation for the basic level, investing in infrastructure, implementing the school feeding programme at the JHSs level, and also partnering with donor agencies to support the funding of the sector.

The study recommends for further studies that, the study should be replicated at the regional or national level to confirm if the effect of the FSHS programme is nationwide. Also, considering the academic performance of JHS pupils admitted into the SHS, it is vital to conduct a study on the quality of Form One students admitted into the various SHS.



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## APPENDIX I

### UNIVERSITY OF GHANA

### INSTITUTE OF STATISTICAL, SOCIAL AND ECONOMIC RESEARCH

### QUESTIONNAIRE FOR PUPILS

Dear Respondent,

The goal of this study is to obtain first hand data on government's investment into Basic Education post the implementation of the Free SHS Programme and how academic performance is affected. This is a partial fulfilment of my M.A. Programme. I, therefore solicit your cooperation and consent to participate in this study. Please rest assured that the confidentiality of your response is highly guaranteed.

#### Section A

##### Bio – Data

1. Age [ ]
2. Form a. One [ ] b. Two [ ] c. Three [ ]
3. Sex a. Male [ ] b. Female [ ]
4. What is your usual means of getting to school? a. Car [ ] b. Motorcycle [ ] c. Bicycle [ ] d. Walking [ ]
5. By this means how long does it take you to get to school in minutes? [ ]
6. Who takes care of your education needs? [ ]
7. What is the educational level of your caretaker? [ ]
8. What is the occupation of your caretaker? [ ]

#### Section B

##### Part One: School Construction

What is the state of the following structures in your school?

1. Classroom blocks? a. Very poor [ ] b. poor [ ] c. acceptable [ ] d. good [ ] e. very good [ ]
2. Library? a. Very poor [ ] b. poor [ ] c. acceptable [ ] d. good [ ] e. very good [ ]
3. ICT lab? a. Very poor [ ] b. poor [ ] c. acceptable [ ] d. good [ ] e. very good [ ]
4. Room for practicals? a. Very poor [ ] b. poor [ ] c. acceptable [ ] d. good [ ] e. very good [ ]
5. Urinal? a. Very poor [ ] b. poor [ ] c. acceptable [ ] d. good [ ] e. very good [ ]

6. Toilet? a. Very poor [ ] b. poor [ ] c. acceptable [ ] d. good [ ] e. very good [ ]
7. Hand wash station? a. Very poor [ ] b. poor [ ] c. acceptable [ ] d. good [ ] e. very good [ ]
8. Canteen? a. Very poor [ ] b. poor [ ] c. acceptable [ ] d. good [ ] e. very good [ ]
9. How important are these structures for learning? a. Very unimportant [ ] b. unimportant [ ] c. neutral [ ] d. important [ ] e. very important [ ]

### **Part Two: Teacher Quantity and Quality**

10. How many students are in your class? [ ]
11. How many teachers teach you? [ ]
12. How often do they come to school? a. Very often [ ] b. Often [ ] c. Sometimes [ ] d. Seldom [ ] e. Never [ ]
13. What is your level of understanding when you are being taught? a. very poor [ ] b. poor [ ] c. average [ ] d. good [ ] e. very good [ ]
14. How well do teachers encourage you to study? a. Very poor [ ] b. poor [ ] c. acceptable [ ] d. good [ ] e. very good [ ]
15. How often are you given exercises? a. Very often [ ] b. Often [ ] c. Sometimes [ ] d. Seldom [ ] e. Never [ ]
16. How often are you given assignments? a. Very often [ ] b. Often [ ] c. Sometimes [ ] d. Seldom [ ] e. Never [ ]
17. How well do teachers prepare you for exams? a. Very poor [ ] b. poor [ ] c. acceptable [ ] d. good [ ] e. very good [ ]

### **Part Three: School Feeding**

18. Do you benefit from the School Feeding Programme? a. Yes [ ] b. No [ ]
19. To what extent does the food motivate you to attend school? a. Very often [ ] b. Often [ ] c. Sometimes [ ] d. Seldom [ ] e. Never [ ]
20. Do you bring your own food or money to buy food? a. Yes [ ] b. No [ ]
21. How well are you able to study when you are hungry? a. Very poor [ ] b. poor [ ] c. acceptable [ ] d. good [ ] e. very good [ ]
22. How well are you able to study when you are satisfied? a. Very poor [ ] b. poor [ ] c. acceptable [ ] d. good [ ] e. very good [ ]

### **Part Four: Pedagogical Materials**

23. Does all the students have a chair to sit on? a. Yes [ ] b. No [ ]

24. Where do you keep your exercise and assignment books? [ ]
25. How safe is this storage space? a. Very poor [ ] b. poor [ ] c. acceptable [ ] d. good [ ] e. very good [ ]
26. How often do teachers use textbooks when teaching? a. Very often [ ] b. Often [ ] c. Sometimes [ ] d. Seldom [ ] e. Never [ ]
27. How often do you get access to textbooks for learning? a. Very often [ ] b. Often [ ] c. Sometimes [ ] d. Seldom [ ] e. Never [ ]
28. How often do teachers use visual aids when teaching? a. Very often [ ] b. Often [ ] c. Sometimes [ ] d. Seldom [ ] e. Never [ ]
29. How well does visual aids help you understand what is being taught? a. Very poor [ ] b. poor [ ] c. acceptable [ ] d. good [ ] e. very good [ ]
30. Do you engage in practicals? a. Yes [ ] b. No [ ]
31. If yes, what subjects do you engage in?

**Part five: Integrated School Health Services**

32. Does the school have a first aid box? a. Yes [ ] b. No [ ]
33. If yes, who gives the first aid? a. Teacher [ ] b. Student nurse [ ]
34. When a student falls sick, how effective is first aid given in the school? a. Very poor [ ] b. poor [ ] c. acceptable [ ] d. good [ ] e. very good [ ]
35. How important do you think healthcare is in schools? a. Very unimportant [ ] b. unimportant [ ] c. neutral [ ] d. important [ ] e. very important [ ]

**Part Six: Academic Performance**

36. What did you score in Maths? [ ]
37. What did you score in Science? [ ]
38. What did you score in English? [ ]
39. What core subject do you find the most difficult?
40. Why is that subject difficult?
41. What core subject do you find easy the most?
42. Why is that subject easy?
43. Do you have a teacher at home? a. Yes [ ] b. No [ ]
44. If yes, to what extent do you think having a teacher at home helps improve your academic performance? a. Very unimportant [ ] b. unimportant [ ] c. neutral [ ] d. important [ ] e. very important [ ]

## APPENDIX II

### UNIVERSITY OF GHANA

#### INSTITUTE OF STATISTICAL, SOCIAL AND ECONOMIC RESEARCH

#### INTERVIEW GUIDE FOR HEADTEACHERS

Dear Respondent,

The goal of this study is to obtain first hand data on government's investment into Basic Education post the implementation of the Free SHS Programme and how academic performance is affected. This is a partial fulfilment of my M.A. Programme. I, therefore solicit your cooperation and consent to participate in this study. Please rest assured that the confidentiality of your response is highly guaranteed.

#### Questions

1. What inputs are you to receive from the government as a school?
2. How often are these inputs supposed to be received by the school?
3. Which of these inputs have been received so far for this academic year?
4. From 2017 till date, what inputs have you received from the government?
5. How often are these inputs received?
6. Is the school currently in need of any input(s)?
7. Does the school have alternative ways in getting these inputs?
8. Does the school have identified sponsors who help with getting these inputs?
9. How many teachers are in this school and are they enough for the school?
10. Has any construction been started in recent times and what is its current state?
11. Is the school enrolled on the School Feeding Programme? If yes, how is it going?
12. Does the school have a sick bay or a first aid station and what is its current state?
13. Do teachers have the required teaching and learning materials for the updated curriculum?
14. How does the availability of these inputs facilitate the teaching and learning process?
15. How does the unavailability of these inputs affect the teaching and learning process?
16. How does these inputs affect students' academic performance?
17. In your own views, would you say the Free SHS Programme has affected the quality of basic education judging from the state of government's input since the inception of the programme till date, and in what ways?

## APPENDIX III

### UNIVERSITY OF GHANA

#### INSTITUTE OF STATISTICAL, SOCIAL AND ECONOMIC RESEARCH

#### FGD GUIDE FOR TEACHERS

Dear Respondent,

The goal of this study is to obtain first hand data on government's investment into Basic Education post the implementation of the Free SHS Programme and how academic performance is affected. This is a partial fulfilment of my M.A. Programme. I, therefore solicit your cooperation and consent to participate in this study. Please rest assured that the confidentiality of your response is highly guaranteed.

#### Questions

1. Do teachers have the required teaching and learning materials for the updated curriculum?
2. How does the availability of these inputs facilitate the teaching and learning process?
3. How does the unavailability of these inputs affect the teaching and learning process?
4. How does these inputs affect students' academic performance?
5. Are the available teachers enough for the school? If no, how do you manage?
6. Are the available infrastructure enough for the school? If no, how do you manage?
7. Is the school enrolled on the School Feeding Programme? If yes, how is it going?
8. Does school feeding play a role in the teaching and learning process?
9. Does the school have a sick bay or a first aid station and what is its current state?
10. In your own views, would you say the Free SHS Programme has affected the quality of basic education judging from the state of government's input since the inception of the programme till date, and in what ways?

