UNIVERSITY OF EDUCATION, WINNEBA

DETERMINANTS OF ACADEMIC ACHIEVEMENT OF STUDENTS IN PUBLIC JUNIOR HIGH SCHOOLS IN THE EFFUTU MUNICIPALITY

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Requirements for the Award of Master of Philosophy (Basic Education) Degree**

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DECLARATION

Student's Declaration

I, Gifty Koomson, hereby declare that this thesis is the result of my own original research and it has not been submitted, either in part or whole for another degree elsewhere with the exception of quotations and references contained in published works which have all been identified and acknowledged,

Signature: ……..…….

Date: ……..……..

Supervisors' Declaration

I hereby declare that the preparation and presentation of this dissertation was supervised in accordance with guidelines and supervision of dissertation as laid down by the University of Education, Winneba.

Kweku Esia-Donkoh (Principal Supervisor)

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Date……..

Mrs. Theresa Antwi (Co-Supervisor)

Signature…….

Date……..

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DEDICATION

To Dr. Bernard B. B. Bingab and Ebenezer Nii Adotey Ankrah.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

The study investigated the determinants of academic achievement of students in public junior high schools in the Effutu Municipality. Specifically, the study sought to investigate how teacher-related factors, school environment-related factors, student-related factors, and home-related factors determined academic achievement of students in public junior high schools in the Municipality. The study, which was based on Bronfenbrenner's (1989) Ecological Systems Theory, was underpinned by the positivist epistemology and objectivist ontology because it adopted the quantitative approach of the descriptive survey design to collect and analyse quantitative data. The target population was all teachers and students in public and private Junior High Schools (JHSs) in the Effutu Municipality while the accessible population comprised all teachers and students in public JHSs in the Municipality. Through stratified and census sampling techniques, a sample size of 689 respondents, involving 585 students and 104 teachers were obtained. However, a total of 660 questionnaires filled in by 560 students and 100 teachers were retrieved and used for the analysis. This showed a response rate of 95.8%. Two sets of questionnaire, one each for the sampled students and teachers were designed by the researcher, pre-tested, and used to collect data for the study. In analysing the data, frequency, percentage, mean, standard deviation, Pearson correlation, and multiple regression were used with the aid of Version 20 of Statistical Product for Service Solutions (SPSS). The results from the analysis showed a positive and statistically significant relationship between teacher-related factors and the students' academic achievement. It was also revealed from the analysis of the data that school environment-related factors identified for the study collectively contributed 57.4% of the variance in the students' academic achievement. This was found to be statistically significant and critical in determining academic achievement of the students. Furthermore, the analysis of the data established that student-related factors identified for the study collectively contributed 76.5% to the students' academic achievement, implying that they were good predictors of students' academic achievement. Similarly, the analysis of the data portrayed that home-related factors had a statistically significant relationship with the students' academic achievement. Based on the findings, it was recommended among other things that adequate teaching and learning resources, facilities, and conducive school atmosphere and climate should be provided by the headteachers to enhance effective teaching and learning. The activities of guidance and counselling units in the schools should be strengthened by the Ghana Education Service and the headteachers by providing them with the required resources and training to implement their guidance programmes effectively to improve on the behaviours of students. Again, parents should be encouraged to get involved in their children's' education. The Directorate of the Ghana Education Service in the Effutu Municipality should organise regular seminars, in-service training programmes for teachers to enhance their pedagogical-content knowledge and pedagogical skills to improve on students' academic achievement.

CHAPTER ONE

INTRODUCTION

1.0 Overview

This opening chapter, provides an introduction to the study. It highlights the background to the study, statement of the problem, purpose of the study, research objectives, and research questions. It also discusses the significance of the study, delimitation of the study, operational definition of terms, and organisation of the study.

1.1 Background to the Study

Education is the process which each society uses to influence its individuals by passing on to them culture, knowledge, laws, morals and ways of behaviour in order to be responsible and contribute to the improvement in the society. It is doubtless, the keystone to a people's way of life of progress and happiness. Education basically refers to the acquisition of knowledge and skills. This means that human kind started receiving education from birth as we started to learn how to crawl, stand, make movement, eat, walk and acquire cultural values. (Nyame, 2011). This shows that the means by which humankind acquires education can be formal or informal. According to Krathwohl (2007) the development of any nation depends largely on the quality of education of such a nation. It is generally believed that the basis for any true development must commence with the development of human resources. For that reason, formal education remains the vehicle for social-economic development and social mobilization in any society. Evidence tends to suggest that overall performance of Junior High School (JHS) education has remained poor (Freiberg, 2008; Alexander

& Simmons, 2005). This seeing low performance in JHS education is explained by the number of factors that are related to school and the home (Berger, 2009).

Despite the efforts made by Ghana government to achieve the goals of providing education for all school going adolescents, low performance of students in JHS have been a "symptom" reflecting the larger number of unqualified junior high school students (Ichado, 2008). It is essential that this symptom be scientifically analysed to discover its underlying cause in order to suggest measures that should be taken to solve this problem (Ichado, 2008). Education is one of the most important aspects of human resource development. In this light, it is imperative that every child should have the opportunity to achieve his or her academic potential (Douglas, 2014). Fullan (2013) explains education as a continuous process which the society establishes to assist its members to understand the heritage of the past and to participate productively in the future. It is the leading out of the in-born powers and potentialities of the individuals in the society and the acquisition of skills, aptitudes, and competencies necessary for self-realization and for coping with life's problem.

In Ghana, the basic level education comprises six years primary and three years junior high school (Ministry of Education Youth and Sport, 2004). The JHS is the entry stage for comprehensive Senior High School (SHS) training in vocational, technical agricultural and general education. Students' academic performance occupies a crucial place in education as well as in learning process. It is considered as an essential criterion to judge one's total potentialities and capabilities which are frequently measured by examination results (Daiz, 2003). It is used to pass judgment on the quality of education offered by academic institutions. In fact, it is still the most

topical debate in learning institutions that caused great concern to educators and researchers due to the alarming examination performance of students.

Martin and Dowson (2009) added that education is the total process of human learning by which knowledge is imparted and skills developed. Junior High Schools are not only occupying a strategic place in the educational system in Ghana, it is also serving as the link between the basic and the tertiary levels of education. According to Northouse (2010), education at JHS level is supposed to be the bedrock and the foundation towards higher knowledge in secondary and tertiary institutions. It is an investment as well as an instrument that can be used to achieve a more rapid economic, social, political, technological, scientific and cultural development in a country. It is rather unfortunate that the junior high schools today are not measuring up to the standards expected of them. It has been observed informally by the researcher that there have been public or community outcries over the persistently poor performance of JHS pupils in the Effutu Municipality in the Central Region, Ghana.

1.2 Statement of the Problem

Education, they say, is the bedrock of development. It is, therefore, the foundation on which a nation's socioeconomic development hinges. If this statement is true, then education, the researcher will say, is a business which needs to be approached with all the seriousness and alacrity due it. The reason had been that no one goes into business not to make loss, but rather, to make profit. Education in Ghana, more especially at the basic level, has witnessed a downward trend in academic output (Oduro, 2008). This has led to a decline in Basic Education Certificate Examination (BECE) over the

years. For about a decade now, almost fifty per cent of all the pupils who write the Basic Education Certificate Examination do not get admission into the senior high, technical and vocational schools (Ichado, 2008).

Statistics from the Effutu Municipal Directorate show that almost the last decade saw over 3,669,138 Basic Education Certificate Examination candidates sitting for the BECE examination. Out of that figure, 1,562,270 of them failed to make the required grades for progression to any of the Senior High Schools, Technical and Vocational Schools (Ichado, 2008). This seems to be a worrying trend. If we fail to arrest this situation early enough, the entire business of education will nosedive ultimately. From the statistics, it is also observed that that the pass rates for the core subjects (English Language, Mathematics, Integrated Science, and Social Studies) in the BECE have been inconsistent and not encouraging. This is shown in the data provided in Table 1.

Table 1: Pass Rates (%) for Core Subjects in BECE

Year	English Language	Mathematics	Integrated Science	Social Studies
2010	64.9	54.4	57.4	60.3
2011	69.2	38.8	61.3	57.9
2013	49.7	30.8	37.0	34.3
2014	67.8	46.6	55.5	52.6
2015	70.6	52.9	60.6	59.7
2016	75.6	60.5	66.4	59.6
2017	74.1	58.2	66.5	60.8

Source: Statistics Unit, Effutu Municipal Education Directorate (2010-2017).

The data in Table 1 show that the pass rates for the core subjects in the BECE for Effutu Municipality has not been encouraging. The worst performance was in 2013 where a pass rate of 50.0% could not be recorded in the four core subjects. This

clearly shows that academic achievement has not been very good in the Municipality. These results suggest that, candidates who failed were likely to go through stress and depression since they were not going to further their education in that same year they completed. As a result, parents of the students who failed needed to spend extra money to register their wards if only they wanted them to further their education. This could have brought a lot of burden on some parents, guardians or families who were not in good financial positions to bear the unexpected cost. There is also the likelihood that some students who may not have continued their education as a result of failing their core subjects would end up indulging in anti-social behaviours like drug addiction, armed robbery, and prostitution. Consequently, the society and the nation stand to suffer loss of human resource.

This situation raises questions about what factors contributed to the poor academic performance of students in the BECE. Though the Effutu Municipal Assembly, in collaboration with the Effutu Municipal Education Directorate have taken some measures in an attempt to address the situation. These measures include institution of extra/remedial classes through sacrifices from teachers, periodic instructional supervision, instilling discipline (academic and socio-personal) among pupils and establishment of categories of awards for the pupils in each school. These notwithstanding, the problem seems to exist. This, therefore, calls for attention and action since many concerns have been raised by stakeholders of basic education in the Municipality on how to overcome the challenge. It is based on this that study seeks to investigate the factors contributing to poor academic achievement among students of Junior High Schools in the Effutu Municipality.

1.3 Purpose of the Study

The purpose of this study was to investigate the factors contributing to academic achievement among public junior high school students in the Effutu Municipality.

1.4 Research Objectives

1. investigate the extent to which teacher-related factors contribute to academic achievement of students in public Junior High Schools in the Effutu Municipality.
2. examine the school environment-related factors that determine academic achievement of students in public Junior High Schools in the Effutu Municipality.
3. ascertain the extent to which student-related factors account for academic achievement of students in public Junior High Schools in the Effutu Municipality.
4. determine the extent to which home-related factors are responsible for academic achievement of students in public Junior High Schools in the Effutu Municipality.

1.5 Research Questions

The following research questions were formulated to guide the study:

1. What teacher-related factors determine academic achievement of students in in public Junior High Schools in the Effutu Municipality?
2. What school environment-related factors contribute to academic achievement of students in public Junior High Schools in the Effutu Municipality?

3. What student-related factors account for academic achievement of students in public Junior High Schools in the Effutu Municipality?
4. What home-related factors determine academic achievement of students in public Junior High Schools in the Effutu Municipality?

1.6 Significance of the Study

It is hoped that the findings of the study will help teachers, students, parents and other stakeholders to identify the school environment, teacher, student and home related factors that account for poor academic achievement of students in the public JHS in the Effutu Municipality. The findings would help the schools, teachers, students and parents devise strategies to address them. In addition, the outcome of the study would also contribute to existing knowledge and debate on determinants of poor academic achievement of students in public JHS in the Effutu Municipality, and serve as the basis for further studies.

1.7 Delimitation of the Study

This study focused on teacher related factors, student's related factors, environmental and home related factors that account for academic achievement. The study was delimited to selected public Junior High School students in the Effutu Municipality.

1.8 Organization of the Study

The research consists of five chapters. Chapter one, which is the Introduction, made up of the background to the study, statement of the problem, purpose of the study, research objectives, research questions, significance of the study, delimitation of the study, operational definition of terms and organization of the study. Chapter two consists of review of related literature. The third chapter which is methodology,

discusses the research design, the population, sample and sampling procedure, the research instruments for data collection, data collection procedure and data analysis. The fourth chapter also consists of presentation and analysis of results, and discussions of the findings of the study. The final chapter which is chapter five, consists of summary of the study findings conclusions, limitation recommendations and suggestions for further studies.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This chapter presents a review of related literature on the study. Issues discussed under this chapter include the theoretical framework adopted for the study. The concept of academic achievement, and factors that determine academic achievement among students, such as teacher-related factors, school environment-related factors, home-related factors, and student-related factors are discussed under this chapter. The chapter ends with a summary of the reviewed literature.

2.1 Theoretical Framework of the Study

The study utilised Ecological Systems Theory (Bronfenbrenner, 1989). The theory attempts to define and understand human development within the context of the system of relationships that form the person's environment. According to Bronfenbrenner's theory (1989), the environment, is comprised of four layers of systems which interact in complex ways and can both affect and be affected by the person's development. These are Microsystems, Mesosystem, Exosystem and Macrosystem. He later added a fifth dimension that comprises an element of time (Bronfenbrenner, 1995) which he called Chronosystem. This theory can be extended to model the development of an organization as well, and is particularly appropriate for describing the complex systems of a school district or an individual school.

The Microsystem is defined as the pattern of activities, roles, and interpersonal relationships experienced by a developing person in a particular setting with particular physical and material features and containing other persons with distinctive

characteristics of temperament, personality, and systems of belief (Bronfenbrenner, 1995). In other words, this layer forms a set of structures with which a person has direct contact, and the influences between the developing person and these structures are bi-directional. The person influences and is influenced by the Microsystem. If this theory is extended from human development to organizational development, and an individual school is the unit of interest, the Microsystem of the school would include students, parents and family members, administration, teachers, and the surrounding community (Johnson, 2008).

The mesosystem, simply stated, comprises the linkages between Microsystems (Bronfenbrenner, 1995). Just as the direction of influence between the school and each structure within the Microsystems is bi-directional, the mesosystem involves bi-directional influences between these various structures. An example of the mesosystem of an individual school can be seen in the interactions and dynamics between two of its microsystems, students and parents. Parental expectations regarding the academic and extra-curricular success of their children can often create a dynamic that directly and indirectly impacts the atmosphere and climate of the school. Unreasonably high expectations and low tolerance for failure can create a dynamic between parent and child that is characterized by tension and fear. This dynamic impacts the school in various direct and indirect ways, including, for example, student behaviour in the classroom resulting from such expectations, pressures to ensure their child's success is placed on school personnel by the parent, or an attempt by school personnel to shield students from such parental pressures by restricting the amount of information that is communicated regarding student achievement (Johnson, 2008).

The exosystem represents the larger social system, and encompasses events, contingencies, decisions, and policies over which the developing person has no influence. The exosystem thus exerts a unidirectional influence that directly or indirectly impacts the developing person. The exosystem of an individual school might be comprised of such structures as, for example, state regulations, local economics, district mandates, and local disasters (Johnson, 2008).

The macrosystem can be thought of as the "social blueprint" of a given culture, subculture, or broad social context and consists of the overarching pattern of values, belief systems, lifestyles, opportunities, customs, and resources embedded therein (Bronfenbrenner, 1995). This system is generally considered to exert unidirectional influence upon not only the person but the microsystem, mesosystem, and exosystems as well. The macrosystem of an individual school is embodied not only in the cultural, political, social, and economic climate of the local community, but that of the nation as a whole (Johnson, 2008). Although not one of the four system layers per se, the chronosystem represents a time based dimension that influences the operation of all levels of the ecological systems. The chronosystem can refer to both short- and long-term time dimensions of the individual over the course of a lifespan, as well as the socio-historical time dimension of the macrosystem in which the individual lives. The chronosystem of an individual school, therefore, may be represented by both the day-to-day and year-to-year developmental changes that occur in its student body, teaching staff and many others as well as the overall number of years in operation.

In an attempt to understand the determinants of academic achievement among public junior high school students in the Effutu Municipality, one has to take into account the individual children as well as the context within which it occurs. The relevance of

this theory to the study is that it impinges on the researcher to view the academic achievement in the school as a phenomenon that is influenced by wider social systems. The theory opined that school children are directly present within some of these social systems, such as their household climate, school environment and others in which they are not directly represented, but which impinge on their development including their siblings, social networks and their parents and the school relationships (Bronfenbrenner, 1986). In addition, the theory makes us aware of the influences of the wider social systems including the cultures, political systems, social institutions, and values that exist in the society and argues that they should be taken into account in the children educational upbringing.

By inference, the influences and experiences that result from the interactions between different social systems play a key role in determining the extent to which children perform in school. From the constructs of the ecological theory, the academic achievement of the students is inextricably linked with the characteristics of social systems in the Effutu Municipality. The ecological theory is, therefore, the most appropriate theory for studying the causes of academic achievement in the school and for locating target(s) for intervention. It is appropriate in that it directs attention to the whole and not to any one part system, or aspect of the children situation. Consequently, it is within this framework that the present study seeks to investigate the determinants academic achievement among public Junior High School students in the Effutu Municipality. Since learning outcomes depend on the way it is presented to the learner by his or her teacher, the way the learner interacts with the learning experiences presented to him and the environment within which the learning takes place, it is therefore expected that these entities would be affected by factors

associated with the school environment, home and community conditions, teacher, education administration and the pupils themselves.

2.2 Concept of Academic Achievements

Various meanings have been assigned to the concept of academic achievement even though generally, it connotes activity and mastery, making an impact on the environment, and competing against some standards that determine excellence (Quansah, 2017, p. 24). To a large extent, the efficiency and quality of school administration or instructional leadership in the school or in the classroom, could be measured by the academic achievement of students. This is supported by Lei, Xu, Shao and Sang (2015) that educational system, evaluation of performance of schools, assessment of teachers' classroom management ability, and measurement of changes in individual student's level of achievement are generally determined by academic achievement. Darling as cited in Quansah (2017, p. 24) argued that academic achievement is knowledge, understanding, skills learning attitudes, and all the things that can be assessed and evaluated by the means of tests during and after instructional activities.

Supporting these opinions, Ferla, Martin and Yonghong (2009) maintain that the quality of students and their learning, value of the curriculum, and ability of teachers and headteachers, determine academic achievement among students. Cary, David and Roger (2008) define academic achievement as performance on task with measures including comprehension, quality and accuracy of answers of tests, quality and accuracy of problem solving, frequency and quantity of desired outcome, time or rate to solution, time on task, level reasoning and critical thinking, creativity, recall and

retention, and transfer of tasks (p. 29). Also, academic achievement refers to a successful accomplishment or performance in a particular subject area and is indicated by grades, marks and scores of descriptive commentaries.

Ferla, Martin and Yonghong (2009) use the notion of academic self-concept referring to individuals' knowledge and perceptions about themselves in academic achievement, and convictions that they can successfully perform a given academic tasks at designated levels. They further stated that academic self-concept represents a more past-oriented, aggregated and relatively stable judgment about one's self-perceived ability in a particular academic domain; while academic self-efficacy represents a context specific and relatively future oriented judgment about one's confidence for successfully performing an upcoming subject-specific academic task.

According to Dimbisso (2009) academic achievement is the successful attainment in a subject area which is determined among other things, by grades, marks, scores, and how serious students take their studies and effectively perform different duties given to them by their teachers. Good as cited in Dimbisso (2009) indicated that academic achievement encompasses actual accomplishment of the students of potential ability. Kobaland and Musek (2001, p. 9) stated that: there are two broad groups of definitions of academic achievement. The first one could be considered more objective, because it refers to numerical scores of a pupil's knowledge, which measure the degree of a pupil's adaptation to school work and to the educational system. The second group is a more subjective one, as its determination of academic success is reliant upon the student's attitudes towards his academic achievement and

himself, as well as by the attitudes of significant others towards his/her success and himself or herself.

The concept of low academic achievement varies in its definition. Diaz (2003) considers low academic achievement or academic failure as the situation in which the subject does not attain the expected achievement according to his or her abilities, resulting in an altered personality which affects all other aspects of life. Similarly, Tapia as cited in Diaz (2003) notes that while the current educational system perceives that the student fails if he or she does not pass, more appropriate for determining academic failure is whether the student performs below his or her potential. Aremu (2000) defines poor academic achievement as the one adjudged by teachers and experts as falling below an expected standard. The interpretation of this expected or desired standard is better appreciated from the perpetual cognitive ability of the evaluator of the performance. The evaluator or assessor can therefore give different interpretations depending on some factors.

Bakare as cited in Asikhia (2010) described poor academic achievement as any performance that falls below a desired standard. The criteria of excellence can be from 40 to 100 depending on the subjective yardstick of the evaluator or assessor. For example, a 70 per cent performance of senior secondary three students in junior secondary English language examination is by all standards a very good performance. However, a cursory look at the performance and the individual examined and the standard of the examination he or she took could reveal that the achievement is a very poor one. Alternatively, a junior secondary two student's academic achievement of 37 per cent in senior secondary three mathematics can be said to be a poor when in actual

fact, it is a good one by all standards. This shows that the concept of poor academic achievement is relative and this depends on so many intervening variables. On the other hand, high academic achievement is explained by Kevin (2000) as students with high school attainment considered to be above the expected standards. For the purpose of this study, the researcher measured the academic achievement of student in public Junior High Schools in the Effutu Municipality by using their end of first term examination scores in English Language, Mathematics, Integrated Science, and Social Studies for the 2018/2019 academic year.

2.3 Determinants of Academic Achievement

It has been established in literature that several factors contribute to the academic achievement of students (Quansah, 2017). Inferring from Rothstein (2000), Quansah (2017) argues that apart from schooling, home environment and peers influence the academic achievement of students. This section discusses teacher-related factors, school environment-related factors, student-related factors, and home-related factors that determine students' academic achievement.

2.3.1 Teacher-Related Factors

Previous studies have investigated the effect of teacher related factors on academic achievement of students. Several researchers have established that teachers for years have been argued as the essential catalyst for school improvement. (Mphale & Mhlauli, 2014). They are the driving force and main resource in the development and academic growth of students as they are sources of knowledge and agents of change. (Wallace, 2011). The teacher-related factors considered for this study are teacher adequacy, teacher commitment, teacher-student relationship, teacher competence, and

teacher support. These are likely to enhance academic achievement of students (high academic achievement). However, the absence of these teacher related factors in the school is likely to negatively influence the academic achievement of students (poor academic achievement).

2.3.1.1 Teacher Adequacy

Quantity and quality of teachers are important factors for consideration if school effectiveness needs to be realized. With this regard, teachers for years have been regarded as essential catalysts for school effectiveness. They are the driving force and main resource in the development and academic growth of students as they are sources of knowledge and agents of change (Wallace, 2011). They play a pivotal role in helping learners to direct their potential to achieve their destiny. Benya (2010) asserts that, noble as the objectives of any educational programme may be, central to their success is that of adequacy of qualified teachers. Indeed before taking off any educational programme, the adequate provision of manpower in terms of teacher must have been put in place.

The quantity and quality of teachers in place has great influence on the kind of school products produced to the society. In this respect, Hargreaves (2000) argues that there is no any educational system that can rise above the quality of its teachers and that no nation can be elevated above the level of its teaching staff. This statement proves the key role played by teachers in any progressive society. For this reason the adequacy of qualified teachers cannot be underestimated for attainment of the objectives of any educational system. In support of this view Bregman and Bryner (2003) insisted that the success or failure of any educational system depends greatly on the quantity and

quality of its teachers. The service of teachers is indispensable; they contribute immensely to lives of the nation's youth.

Education constitutes the most fundamental industry in many developing countries and it is believed to consume the largest proportion of the local vote earmarked for social services. Consequently, Kemmerer (2001) argues that the destiny of a nation is shaped in its classrooms and it is the teacher who is a very important instrument in mounding the destiny of the nation. The report by the UNESCO on thirty years of service to peace, the teacher is described as the spark that forced the whole development process (UNESCO, 2005). According to Rosenhotz et al. (2002), contemporary educational thought holds that one of the pivotal causes of unsteady developments in many countries is the inability to adequately staff schools with teachers. As pointed out by Tyke et al. (2002), schools are plagued by shortages of teachers, primarily due to recent increases in student enrolments, teacher attrition and retirements. Severe teacher shortage is believed to confront many Secondary Schools worldwide and Tanzania is not exempted. Similar situation was observed in Australia by Klaus and Dolton (2008) who argues that the nation will need to hire at least one million teachers over the next ten year and our teacher training institutions are not producing sufficient numbers of teachers to meet the demand.

Klaus and Dolton (2008) concur with MacDonald (2007) that the attrition of both new and experienced teachers is a great challenge for schools and school administrators throughout the United States, particularly in large urban Districts. At the root of school staffing crisis, according to Chapman et al. (2010), there are two converging macro-demographic trends and increasing student enrolments. Tyke and O'Brien

(2002) observe that the resulting shortfalls of teachers forces many education systems to resort to lowering standards to fill teaching openings, inevitably resulting in high levels of under-qualified teachers and lower school performance. Mosha (2014) concurs with Chapman et al. (2010) that, in most of secondary schools in Tanzania especially community based, the number of teachers is not sufficient to be able to assist the implementation of education to the increasing number of students that are currently enrolled making the challenge even more acute.

There are also reported cases by URT (2010) that teachers are in school but their classroom work (delivery, sharing and relationship with learners/students) is not effective and efficient enough. Likewise, the reason for poor performance in Form Four Secondary School examinations is attributed to acute shortage of teachers, unequal distribution of teachers between urban and rural as well as insufficient learning infrastructure such as classrooms, laboratories and other instructional materials (URT, 2010). However, other studies such as Chapman et al. (2010), MacDonald (2007) and Klaus and Dolton (2008) observed that shortage of teachers is a growing problem in many developing countries that offer free or public education like Tanzania. According to Benya (2010), the matter has been extensively studied by a variety of governments and states in order to determine how best to swell the ranks of teachers, and what factors might be eliminated in order to attract more people to the profession.

Ndalichako and Komba (2014) pointed out that there is the lack of science teachers in Tanzania which was further confirmed in the school records. Some schools did not even have a single teacher for some science subjects. Furthermore, they ascertain that

in most of schools visited there were either one or two teachers for the whole school. The shortage of science teachers is a national problem. For example in 2013, the Government employed a total of 14,060 teachers in secondary schools, but only 2,014 of these (14%) were science teachers. There is a nationwide shortfall of 37,130 teachers in secondary schools and most of them (73%) are Science Teachers. The critical shortage of Science Teachers has serious implications in terms of the effectiveness of teaching of which results into poor academic achievement in the National Form Four Examinations. Quantity and quality of teachers are therefore important factors for consideration if school effectiveness needs to be realized.

2.3.1.2 Teacher Commitment

The influence of effective teaching on pupils' academic achievement has been the subject of several studies. Quality of teachers and commitment are key inputs in educational production to perform better achievement. A teacher's knowledge of the subject matter coupled with textbooks, instructional time and other learning materials have great influence on learning at the basic school level (Lockheed & Verspoor, 2001). Agyemang (2003) reported that "a teacher who does not have both the academic and the professional teacher qualification would undoubtedly have a negative influence on the teaching and learning of his/her subject" (p. 2). According to Hedges (2002) many trained teachers are unwilling to accept postings to deprived communities in Ghana. As a result there is a tendency for less qualified teachers to be employed in these communities, which affects their academic performances negatively. Darling-Hammond (2000) found that teacher quality characteristics such as certification status and degrees in subject to be taught are very significant and positively correlated with subject outcomes in science and mathematics.

Ingersoll (1999) found out that 63 per cent of chemistry, physics, earth and space science instructors do not have certification in the subjects and this result in the poor performance of students in American Secondary schools. Also, Greenwald, Hedges and Laine (2006) found academic achievement to be positively correlated with teacher qualification. Additionally, Abuseji (2007) found teacher's qualification to be the second most potent causal effect on student's achievement in chemistry. Bilesanmi (1999) and Okoruwa (1999) also found that teachers' teaching experience had significant effect on students' achievement in science. Fettler (2009) investigated the relationship between measures of teachers‟ experience and students' achievement in science and mathematics. He found that teaching experience as measured by years of service correlated positively with student test results.

Effective teaching embraces a variety of different aspects of teaching such as subject mastery, effective communication, lesson preparation and presentation, pacing the class to the students' level and taking into account individual differences, allowing students to practice and apply what they have learned, letting students know what is expected of them, and monitoring and evaluating performance so that students learn from their mistakes (Lockheed & Verspoor, 2001). Jacob and Lefgren (2006) found a positive correlation between effective teaching and academic achievement. Similarly, Adediwura and Tayo (2007) suggest that effective teaching is a significant predictor of students‟ academic achievement and concludes that effective teaching produce students of higher academic quality. Akiri and Ugborugbo (2009) showed that effective teaching produced better performing students.

2.3.1.3 Teacher-Student Relationship

Instruction refers to the ability to create a connection between the student and the course content, and the nature of tasks conducted in the teaching and learning context (Dubrin, 2008). Core elements of subject matter that facilitate students' linkage to the teaching experience include multiple elements. For example, setting tasks that are appropriately challenging, assigning work that is crucial and meaningful, building a variety into content and utilizing material that arouses curiosity and is appealing to young people. These elements reflect content, subject matter, and learning tasks, which are meaningful to the student. The teacher, therefore, presents the contextual dimension of the subject matter, and emphasizes relevance and utility of what is learned (Pillai & Williams, 2004).

There is evidence indicating that the amount of time students are exposed to instruction will have a positive effect on achievement. Students who spend a large proportion of time in learning activities designed to enhance skill knowledge are likely to attain those skills more than students who spend less time in these activities (McFarland, 2005). A critical factor also affecting achievement is the method of instruction that the teacher employs. Starrat (2003) documented that rote memory strategy, meaningless expressions, terminology and symbols dominate mathematics classes, which consequently lead to lack of understanding and logical reasoning ability. Additionally, studies show that when teachers interact closely with the learners, there are higher chances of student success (Yukl, 2006; Costello, Brunner & Hasty, 2002). Costello, et al., (2002) indicated that students work best when they feel that their teachers not only like them, but also like what they do during the instruction process. As Daft (2005) noted that teachers can be a strong motivator in the

educational achievement of the learners. Hence, students' confidence in their teachers is a result of teacher's warmth during instruction.

Creemers (2002) has shown that instruction context includes actively listening to students' views, allowing students to have input into decisions that affect them, getting to know students, showing no favoritism but affirming all students, accepting students' individuality and having positive but attainable expectations for students. For instance, these elements are a means by which the student engages with the teacher in the teaching and learning context. As well, elements of quality instruction include providing clear feedback to students, explaining things clearly and carefully, injecting variety into teaching methods, encouraging students to learn from their mistakes, clearly demonstrating to students how schoolwork is relevant or meaningful, and allowing for opportunities to catch up (Botha, 2010). Research has also noted instructional strategies indicative of quality teaching that facilitate students' achievement and learning experiences. For example, some strategies include setting tasks that are appropriately challenging, assigning work that is weighty and meaningful, building a variety into content and assessment tasks, and utilizing material that arouse curiosity and is fascinating to young people (Giles, 2005).

2.3.1.4 Teacher Competence

The influence of effective teaching on pupils' academic achievement has been the subject of several studies. Quality of teachers and commitment are key inputs in educational production to perform better achievement. A teacher's knowledge of the subject matter coupled with textbooks, instructional time and other learning materials have great influence on learning at the basic school level (Lockheed & Verspoor,

2001). Agyemang (2003) reported that "a teacher who does not have both the academic and the professional teacher qualification would undoubtedly have a negative influence on the teaching and learning of his or her subject" (p. 2). According to Hedges (2002) many trained teachers are unwilling to accept postings to deprived communities in Ghana. As a result there is a tendency for less qualified teachers to be employed in these communities, which affects their academic performances negatively.

Darling-Hammond (2000) found that teacher quality characteristics such as certification status and degrees in subject to be taught are very significant and positively correlated with subject outcomes in science and mathematics. Ingersoll (1999) found out that 63 per cent of chemistry, physics, earth, and space science instructors do not have certification in the subjects and this result in the poor performance of students in American Secondary schools. Also, Greenwald, Hedges and Laine (2006) found academic achievement to be positively correlated with teacher qualification. Additionally, Abuseji (2007) found teacher's qualification to be the second most potent causal effect on student's achievement in chemistry. Its direct and indirect effect accounted for 4.37 per cent, and 5.00 per cent of the total effect on students" achievement in chemistry in Lagos state, Nigeria. Bilesanmi (1999) and Okoruwa (1999) found that teachers' teaching experience had significant effect on students' achievement in science. Fettler (2009) investigated the relationship between measures of teachers" experience and students' achievement in science and mathematics. He found that teaching experience as measured by years of service correlated positively with student test results.

Effective teaching embraces a variety of different aspects of teaching such as subject mastery, effective communication, lesson preparation and presentation, pacing the class to the students' level and taking into account individual differences, allowing students to practise and applying what they have learned, letting students know what is expected of them, and monitoring and evaluating performance so that students learn from their mistakes (Lockheed & Verspoor, 2001). Jacob and Lefgren (2006) found a positive correlation between effective teaching and academic achievement. Similarly, Adediwura and Tayo (2007) suggest that effective teaching is a significant predictor of students‟ academic achievement and concludes that effective teaching produce students of higher academic quality. Akiri and Ugborugbo (2009) showed that effective teaching produced better performing students.

2.3.1.4 Teacher Support

Previous studies have investigated the effect of teacher related factors on academic achievement of students. Several researchers have established that teachers for years have been argued as the essential catalyst for school improvement. (Mphale & Mhlauli, 2014). They are the driving force and main resource in the development and academic growth of students as they are sources of knowledge and agents of change (Wallace, 2011). Teacher support has been found to be conducive to students' academic achievement (Niehaus, Rudasilla & Rakes, 2012; Sakiz, Pape & Hoy, 2012).

Inferring from Wong, Tao and Konishi (2018), teacher support comes from a very complicated arrangement that involves different sources categorised into four major aspects namely emotional, informational, instrumental, and appraisal. Emotional

support involves the perception of students that teachers are approachable, warm, and encouraging, making them (students) feel they are cared for by their teachers. Informational or instructional support is where teachers provide students with guidance or information that can be used to address a problem. Instrumental support can be understood as the provision of tangible support that seeks to ensure effective learning. An example is when teachers find time to explain unknown concepts to students. Students' perception of instrumental support from teachers make them more likely to perform assigned tasks (Strati, Schmidt & Maier, 2017), value these tasks (Assor, Kaplan & Roth, 2002), exhibit self-regulated learning (Perry, VandeKamp, Mercer, & Nordby, 2002), and consequently, improvement in students' academic achievement. Appraisal support has to do with the evaluative feedback given to students by teachers in the form of constructive criticism or suggestions for improvement. In the school, one of the most salient indicators of such support is when teachers provide students with feedback (Kelly & Antonio, 2016).

Basically, feedback from teachers provides students with information in respect of their performance or understanding of a given topic (Anderson & Palm, 2017). The foregoing suggests that teachers provide different aspects of social support to students and this influences their (students') attitude, behaviour, and academic achievement in a unique way (Tennant, Demaray, Malecki, Terry, Clary & Elzinga, 2015). Based on this, Anderman, Andrzejewski & Allen (2011) argue that teacher support is multifaceted and multidimensional. Among the findings of a study conducted by Wong, Tao and Konishi (2018) is that teacher support is highly important for student learning and academic achievement.

2.3.2 School Environment-Related Factors

Extant literature show that generally, there are many school environment-related factors that have been identified to influence academic achievement of students. These factors include instructional materials, class size (student-teacher ratio), school facilities, effective supervision and conducive school environment. For instance, a study by Karemera (2003) established a significant correlation between conducive school environment-related factors and students' academic achievement.

2.3.2.1 Instructional Materials

The success of teaching and learning is likely to be strong influenced by resources made available to support the process and direct ways in which these resources are managed. Clearly, schools that lack teachers, textbooks and other learning materials will not be able to do an effective job. In this sense, resources are vital to quality education although how and to what extent this so have not yet been fully determined. A study conducted by Adane (2013) revealed that consistency in the supply of textbooks for a particular period affected students' performance. Lack of or inadequate textbooks in the schools were also found to impede students' proficiency in the use of English Language. Instructional materials provide information, organize the scope and sequence of the information presented, and provide opportunities for pupils to use what they have learned (Lockheed & Verspoor, 2001). Students usually perform better when they have books or study aids to foster their learning. These study aids or material resources could be textbooks, teachers‟ guides, wall pictures, maps, atlases and other learning aids. The availability and use of teaching and learning materials affect the effectiveness of a teachers lessons.

2.3.2.2 Class Size

Class sizes have also been identified as determinants of academic achievement Studies have indicated that schools with smaller class sizes perform better academically than schools with larger class sizes. Fabunmi, Brai-Abu and Adeniji (2007), for instance, indicated that three class factors (class size, student classroom space and class utilization rate), when taken together, determined significantly students' academic performance in Oyo state, Nigeria. In the same way, Salfi and Saeed (2007) found a significant correlation between school size and students" achievement in Pakistan. They revealed that small schools performed better than medium and large schools. Tremblay, Ross and Berthelot (2001) found class size to be inversely related to achievement, especially for children in early grades. Kraft (1994) in his study of the ideal class size and its effects on teaching and learning in Ghana concluded that class sizes above 40 have negative effects on students" achievement. Adeyela (2000) found that large class size is unconducive for serious academic work. Asiedu-Akrofi (1978) indicated that since children have differences in motivation, interests and abilities and they also differ in health, personal and social adjustment and creativity generally good teaching is the best done in classes with smaller members that allow for individual attention.

Teachers and the number of learners to be taught in a single classroom can be a very important determining factor for academic achievement of students in secondary schools in any country. Tanzania Institute of Education (URT, 2010) pointed out that teacher student ratio shall be 1:40. The number of students per class shall be 40 which will help to bring about good academic achievement of secondary school students in Tanzania. Consequently, if the teacher-learner ratio exceeds the stated ratio, the

academic achievement of the students would be negatively affected. In their study, Alderman, Orazem and Paterno (2001) concluded that higher student-teacher ratio had a consistent negative effect on student achievement. Graddy and Stevens (2003) in their study, concluded that student-teacher ratio was an important determinant of fees and parents choose schools with lower student-teacher ratio. Levacic (2005) conducted a study on Grade KS3 and found that reduction in the student-teacher ratio had statistically significant positive effect on mathematics achievement.

A study by Waita (2012) on pupil-teacher ratio and its impact on academic performance in public primary schools Kenya found that, Pupil-Teacher Ratio (PTR) has statistically significant effect on pupil's performance in primary schools. The study showed that as PTR increases, average test scores in primary schools decreases. Likewise a study by David (2014) in Sumbawanga District found that one of the factors influencing students' academic performance is the low number of teachers to students' ratio especially in public schools. The teacher student ratio stands at an average of 52:1 and as high as 72:1. However, a study done by Tamasha (2012) in 16 primary and 16 secondary schools in 8 Districts of Tanzania found that on average the student teacher ratio in secondary schools was 1:88 and only one school had a target ratio of 1:40. The study found that in eight out of 13 secondary schools the student-teacher ratio was higher than 50. It was higher than 100 in four out of 13 schools. A study by Tamasha (2012) also found that, in Musoma and Temeke the ratios were so high that it was difficult to comprehend how learning can take place in those schools. In Arusha, Makete, Musoma and Temeke the student teacher ratio in secondary schools was worse than in primary schools, yet in secondary schools there should be more teachers, including specialist subject teachers.

Shah and Inamullah (2012) found out from their study that state that over-crowded classes could have a direct impact on students' learning. They do not only affect students' achievements, but the teachers had to face different problems such as discipline, behavioural problems, poor health and poor performance of students, stress on teachers and increased in drop-out rate of students. A survey conducted in Kenya by UNESCO (2005) as cited in Bakari, Likoko and Ndinyo (2012) shows that the average ratio in 162 sampled schools is 58:1, against the requirement of 40:1. Such class sizes in public secondary schools make it difficult for the teachers to teach lessons effectively as compared to their counterparts in private schools who handle a smaller number of pupils. Thus, teacher-learner ratio is a significant factor that can influence effective performance of schools in Tanzania just like in any other country.

2.3.2.3 School Facilities

The development and maintenance of school facilities in educational institutions by communities, parents and sponsors should continue to be encouraged. This is because lack of such facilities interferes with learning process (Dolan, 2001). Dolan (2001) further noted that school facilities accounted for difference in achievement. The school facilities include both the physical and the teaching and learning facilities. Physical resources include classrooms, administrative block, libraries, laboratories, workshops, playgrounds, assembly halls, and kitchen, toilets and staff quarters. Erlichson (2001) argues that an educational programme cannot be effectively implemented using only policy guidelines even if teachers were trained and committed without adequate and appropriate physical facilities such as classrooms, toilets and playing grounds. Erlichson (2001) further explains the importance of ensuring that there are adequate and appropriate facilities for teaching- learning so

that educational programmes could be implemented effectively. It could be inferred that schools that lack adequate class rooms for instance, hold their lessons outside or under trees. During bad weather such lessons are postponed or are never held altogether. This interferes with syllabus coverage and students from such schools do not perform well in examinations.

Fickes (2003) on the other hand identifies that schools are characterized by variety in the size and quality of buildings. Some schools share classrooms and science laboratories, which are too small for current classes of forty and above students. On the other hand new schools have teaching rooms which are too small because they were not built to specifications. Moreover, most school buildings and other facilities are poorly maintained. Such facilities hamper the teaching and learning process and eventually affect student performance in examinations. Fielding (2000) argued that lack of laboratory facilities was a major contribution to poor performance of some schools, because candidates could not answer questions in practical science subjects. The generalization of an education innovation is accompanied by the need for new resources which should be available for a sufficiently long time in order that the innovation becomes part of the daily life of educational establishment.

Hathaway (1988) posits that lack of library facilities is one of the most serious problems standing on the way of achieving high education standards in learning institutions. Brady (2002) carried out a study on the effects of school physical facilities on academic performance and established that availability of facilities had a direct link with performance of learners in examination. This agrees with many research findings which have shown that the success of any educational endeavour

rest on the availability of physical facility on the school building. Colgan (2003) argued that the availability of the school building and other plans contributed to good academic performance as they enhanced effective teaching-learning activities. He further stated that well-constructed school buildings, aesthetic conditions, playground, latrines/places of convenience etc. usually contributed to achieving high educational attainment by the students.

In addition, the school location and quality of the physical building influence the performance and achievement levels of pupils. Harbison and Hanushek (2012) stated that the quality of the physical facilities is positively related to student performance. This assertion corroborates that of Danesty as cited in Yinusa and Basil (2008) who stressed that good sitting arrangement and good buildings produce high academic achievements and performance, while dilapidated buildings that lack mental stimulating facilities coupled with low or no sitting arrangements is destructive. According to Asikhia (2010) where the school is located determines to a very large extent the patronage such a school will enjoy. Similarly, the entire unattractive physical structure of the school building could de-motivate learners to achieve academically. This is what Isangedighi (1998) refers to as learner's environment mismatch. According to him, this promotes poor academic performance. Engin-Demir (2009) argue that attending a school with a better physical environment is associated with increased mathematics scores. Adepoju (2001) found that students in urban schools manifest more brilliant performance than their rural counterparts. Also, Ogunleye (2002) reported a significant difference in the achievement of students in urban peri-urban areas.

A good school facility supports the teaching and learning process of any school. Research has shown that clean air, good light, and a small, quiet, comfortable, and safe learning environment are important for academic achievement (Cotton 2001, Schneider 2002). While factors such as student socioeconomic status and parental involvement are among the most important predictors of student academic performance, the condition, adequacy and management of a school building are directly under the control of the school management. Hence, improving school facilities offers a feasible opportunity for improving academic achievement. Edwards (2002) believes that schools that who maintain the environment of urban educational facilities have a significant impact upon teaching and learning. It could therefore be argued that a critical element of effective schools is that they strive to avoid things that do not work as they are committed to implementing things that enhance academic achievement among students. In effect, certain aspects of school climate such as orderly, safe, and appropriate educational facilities which are conducive to teaching and learning greatly determine academic achievement of students. It is therefore prudent that management of public Junior High Schools in the Effutu Municipality should endeavour to ensure improvements in the physical climate of their schools so as to establish gains in academic achievement. Substandard student academic achievement in deteriorating schools is often connected to policies and/or decisions which negatively affect the physical learning environment.

2.3.2.4 Effective Supervision

Grauwe (2007) traces the origin of supervision back to the birth of public education, when young nations used education to forge a common language and culture. Researchers have assigned several definitions and interpretations to supervision, but

almost all of them center on a common aim or objective. Pierce and Rowell (2005, p.23) define supervision as "a developmental process designed to support and enhance an individual's acquisition of the motivation, autonomy, self-awareness, and skills necessary to effectively accomplish the job at hand". Burke and Krey (2005) also define supervision as instructional leadership that relates perspectives to behaviour, focus on processes, contributes to and supports organizational actions, coordinates interactions, provides for improvements and maintenance of instructional program, and assesses goal achievements.

Glickman, Gordon and Ross-Gordon (2004) refer to the dictionary definition of supervision as to watch over‖, direct‖, oversee, and superintend‖. They believe that because the historic role of supervision has been inspection and control, it is not surprising most teachers do not equate supervision with collegiality. From the researcher's point of view, the term supervision in education is a service provided to teachers, both individually and in groups, for the purpose of improving instruction, with the student as the ultimate beneficiary. That is, supervision is a means of offering to teachers specialized help in improving instruction. In this sense, supervisors should remember that teachers want specific help and suggestions, and they want supervisors to address specific points that can help them to improve.

The primary purpose of supervision according to Behlol, Yousuf, Parveen and Kayani (2011) is to help the teachers to improve the teaching learning process in the classroom. It is not only visiting the classroom and writing some lines in the logbook about the efficiency of the teachers, and just checking whether the work has been done according to the set plan or not. It is the process of counselling, sharing and

supporting teachers to improve their performance in the classroom. The improvement of instruction as the ultimate purpose of supervision is also emphasized in other research work on instructional supervision (Sergiovanni & Starrat 2002; Fook & Sidhu, 2010; Wadesango & Machingambi, 2011). Kutsyuruba (2003) sees the overarching purpose of supervision as to enhance teachers' professional growth by providing them with feedback regarding effective classroom practices. Supervision has been defined as the attempt through a second party intervention to ascertain, maintain and improve the quality of work done (Sullivan & Glanz, 2000). Thus in a school situation all the activities that are undertaken by the head teacher to help teachers maintain and improve their effectiveness in the classroom, characterize instructional supervision.

The role of the head teacher in instructional supervision is therefore indispensable. Rosendale (2009) contends that in carrying out supervisory tasks, the headteacher should have clear specification of goals and targets. Sergiovanni (2009) in his study asserted that most headteachers did not have objectives and mission targets to guide their schools. His study revealed that 80% of all the headteachers interviewed had not attended any lesson thus were not aware of what was going on in their classes but only waited for final results, this resulted in their schools posting low results. Etsey, Amedahe and Edjah (2004) in a study of 60 schools from peri-urban (29 schools) and rural (31 schools) areas in Ghana found that academic achievement was better in private schools than public schools because of more effective supervision of work. According to Etsey (2005), if circuit supervisors are more regular in schools, this would put the teachers on the alert to be more regular and early in school. This would forestall teacher absenteeism and improve teaching in the schools. If teachers are

present always following regular visits of circuit supervisors, pupils would be challenged to change their attitudes toward school.

2.3.2.5 Conducive School Environment

The school has the main responsibility of training students to acquire knowledge, skills and experiences that will make them responsible citizens in the future. As such, teachers, who are to help students understand academic concepts in the classroom, are duty bound to see to it that the syllabi are completed. This implies that the school and classroom environments should be disciplined, well-ordered, and conducive for instructional and co-curricular activities (Kudari, 2016). It is therefore important for teachers and students to relate very well and show co-operation in reforming various activities in the school, and more especially, exhibit traits of morality and ethics (Kapur, 2018). This implies that generally, there should be relatively effective classroom management. Thus, in the classroom, learning plans, instructional pedagogies, and instructional processes should be designed in a well-organised and systematic manner. Discipline and effective flow of communication among headteachers, teachers and students would enhance the learning of students, and eventually, their academic achievement.

Students are enrolled in schools to learn academic concepts as well as learn how to interact and socialise with others by forming friendly relationships with their colleagues (Kapur, 2018). Establishment of such social circles and friendships impact positively on students' academic achievements. Singh (2014) attests that social circles among students are important in so many ways, including solving academic challenges, participating in co-curricular and leisure activities, as well as sharing in

one's joys and sorrows. The deduction is that through social circles and good friendship cliques, students learn in groups and this results in their social satisfaction and happiness.

In some situations, students find it difficult to learn and understand some concepts. In situations of this nature, students would require some form of assistance from their peers, colleagues, and in certain instances, from their teachers. This means that when students face challenges in learning they should be encouraged, motivated, and assisted to overcome these difficult situations to enable them perform well in their academic work in the future. Hence, students in public Junior High Schools in Effutu Municipality must be helped to understand their strengths and weaknesses in order to devise strategies to improve on their academic achievement. This is why Srinivas and Ventkrishnan (2016) argue that when students experience difficulties in certain areas of what they are taught, it is essential for teachers to repeat concepts, and provide students with class exercises and assignments to enable them gain a better understanding of the concepts taught.

Students in public Junior High Schools in Effutu Municipality face many and varied challenges including absenteeism, truant and violent behaviours, alcoholism, teenage pregnancy and induced abortions. These difficult situations sometimes make them drop from school, and in most cases, impact negatively on their academic achievement. According to Kapur (2018) these factors therefore have a direct impact on their academic achievement because they may psychologically and emotionally imbalanced, and could experience depression, trauma or stress. Maganga (2016) thus reiterates the need for the establishment and resourcing of Guidance and Counselling

Units in schools to strengthen their activities and provide effective guidance and counselling services to help students focus on their academic work and achieve good grades. Among others, these could make the school environment conducive for the students because they would be aware of where to go for assistance or guidance in cases of difficult situations.

2.3.3 Student-Related Factors

Student-related factors are the various conditions in school that are available to the student and have an impact on their academic achievement. Generally, it has been established that school-related factors have a direct impact on the academic achievement of students based on certain characteristics. For instance, a study by Mukhwana (2013) established that there is a positive correlation between student-related factors and academic achievement. Researchers have examined and established many characteristics of students that generally have a direct impact on their academic achievement. These include student motivation, student effort, student engagement, and student discipline and truancy.

2.3.3.1 Student Motivation

The concept of motivation is considered as a crucial factor that affects human behaviour and performance (Kian, 2014; Turan, 2015). Educational researchers and practitioners express that motivation is one of the most important factors in student achievement and in ensuring continuous achievement (Alkış, 2015; Pintrich, 2003; Aluçdibi & Ekici, 2012; Pintrich & Schunk, 2012). Lin (2012) describes motivation as intrinsic desires which are already present in the individual or which are reflected in the individual while acquiring new information and learning. Many definitions of

motivation have been given by experts and researchers but the concept motivation is derived from the Latin word, “movere”, which literally means moving (Seiler et al. 2012). In this regard, Ertem (2006) defines motivation as an inner state uncovering individuals’ behaviour which direct them to put up certain attitudes and actions.

According to Baumeister and Vohs (2007) motivation is a state where the individual displays various attitudes voluntarily in order to achieve a certain goal. Küçüközkan (2015) defines motivation as the sum of the efforts made for mobilizing the individual towards one or more particular goals and for ensuring the continuity of this movement. Similarly, Waterman (2005) views motivation as a force representing the internal factors initiating the movements that should be performed to fulfill a need and the external factors that encourage this behaviour. It could be deduced from the foregoing that three essential factors are involved in the concept motivation. These are triggering the behaviour of the individual that is required for a certain goal, guiding this behaviour, and the internal state that initiates and guides this behaviour. The urge of satisfying the needs of the individual is the main source of motivation. In addition, many concepts, such as interests, values, attitudes and desires of the individual towards an action, affect the process of motivation as well (Akpur 2015). Therefore, motivation has a multi-dimensional structure instead of a simple and basic one. In this regard, each individual may have a different amount of motivation.

Deci and Ryan (2002) examined three categories of motivation that affects achievement. These are intrinsic motivation, extrinsic motivation, and amotivation. If the factors that direct the individual to a certain behaviour comes from his own inner world, in a manner that is independent of the drives outside of the individual, it is seen

as intrinsic motivation (Ural, 2009). The main sources of intrinsic motivation are the interest, curiosity and needs of the individual. Actions which are performed through intrinsic motivation and which originate from these sources are inherently rewarding for the individual, and as such, no additional motive or punishment is needed (Şen, 2006). In this case, the individual is expected to display behaviours such as volunteerism, willingness and making a choice (Deci & Ryan, 2002). These actions usually generate intrinsic results as personal experiences which have a meaning for the individual (Erdoğan, 2013). A study underlining the importance of intrinsic motivation indicated that students learn a topic more easily if they are willing to apprehend and grasp the topic (Çelen, 2010).

On the other hand, if the drive of the individual's behaviour is independent of him, in other words if it lies in his environment, then this is extrinsic motivation. The behaviours which originate from external sources, such as rewards, punishment, and social support, are behaviours which are linked with the result of the individual's action (Erdoğan, 2013). In this regard, the individual is not motivated by any interest in the action itself but rather he is motivated by the benefits that this action brings (Şen, 2006). Some actions which are considered to be important for the students by teachers and parents are triggered by extrinsic motivation, and, therefore, they do not draw the intrinsic attention of individuals (Deci & Ryan, 2002). Amotivation is perceived when individuals cannot establish a connection between their actions and the results of their actions, implying no motivation (Reeve, 2013; 2014). In this case, students cannot make an association with the impact of their actions or the impact of their surroundings, and, thus, they cannot be motivated either intrinsically or extrinsically. As such, a student who believes that his actions will not provide a

benefit for him or her does not take any action, and this result in the state of a motivation (Tahiroğlu & Aktepe, 2015).

Apart from these motivation types, there are in the literature additional motivational components that give clues about the nature of the motivation of students. Some of these components which are directly related to the academic achievement of students are intrinsic goal orientation, extrinsic goal orientation and the value of the subject, control of learning beliefs, self-sufficiency and test anxiety (Aktan & Tezci 2013; Bates et al., 2016). In addition to the different motivation types and components that are used in understanding the importance of motivation for student achievement, researchers on education use different motivation theories as well (Frontier et al., 1995). Expectation-value theory (Berndt & Miller 2012), goal theory (Meece & Holt, 1993), self-sufficiency theory (Zimmerman et al., 1992) and the theory of intrinsic motivation (Deci & Ryan, 2002) are some of these motivation theories. Moreover, most theories and research findings have established the significant influence of motivation on student learning and their achievement. (Dede & Yaman, 2008).

Most literature on motivation as a prerequisite for learning reveal focused on the factors that make individuals to act and to pursue particular actions in their learning endeavours (Liu et al., 2016). In particular, the studies underlining the importance of motivation as a factor that facilitates the learning achievements of students (Kaya, 2013; Karagüven, 2012; Wolters & Rosenthal, 2000) have argued that learning achievement and effectiveness may vary according to motivators such as interest, desire and need (Tahiroğlu & Aktepe, 2015). Thus, although there are studies showing that there is a positive relationship between intrinsic motivation and

academic achievement (Burton et al. 2006), others are suggesting that intrinsic and extrinsic motivation should be combined together in order to motivate an individual to get into action for a goal (Barrett et al., 2012; Gillet et al., 2009; Hayenga & Corpus 2010).

Motivation is important to the development of life-long learners, but is often hard to see in many classrooms. Many teachers, in both general and special education have come to rely on rewards and incentive programs in order to manage behavior and learning (Baranek, 1996). For example, a teacher may give a boy a treat for entering the room quietly with the hope that the reward will increase the chance that the boy will enter the room quietly the next time. The teacher may think that she is promoting a productive classroom environment, but the boy only learns what behaviors earn a treat. He does not learn about the value of a productive classroom environment.

2.3.3.2 Student Effort

Many student believe that they succeed for a variety of reasons, and their beliefs and interest are very important in determining how they deal with failure, the risks they are willing to take, and the ways in which they interacts with new opportunities. To this end, it is without doubt that the academic achievement depends on the number of factors of which effort is paramount. (Tella, 2007). Students' effort refers to the overall amount of energy expended in the process of studying (Zimmerman et al., 1992). Carbonaro (2005) defines school efforts as the amount of time and energy that students expend in meeting the formal academic requirements established by their teachers and or school. He identified three types of school effort, thus rule oriented effort (showing up in and behaving in class), procedural effort (meeting specific class

demands such as completing assignments on time) and intellectual effort, (critically thinking about and understanding the curriculum).

Kraft and Singhapakdi (1991) confirmed that students with strong work ethics are strongly committed to their work, more dedicated, focused and tend to perform better than their peers. Thus the role of individual students' effort towards enhanced performance cannot be over emphasized. In view of this, Abaasi and Mir (2012) posited that students themselves play critical roles in getting good grades and must therefore explore all opportunities available within their academic environment. Refreshingly, when students attribute their academic success to effort or receive feedback that attributes their success to effort, they develop a higher self-efficacy and expectations for future skill development (Siegle & McCoach, 2007). According to Engin-Demir (2009) regardless of intelligence, students who spend more time on assignments and homework are very important activities to improve their grades. The amount of time students invests in homework and other related activities have also been found to be strongly related to motivation.

Butler as quoted in Etsey (2005) found homework to be a correlate of academic performance. He stated that "homework bore a positive relationship with learning outcomes when it is relevant to learning objectives, assigned regularly in reasonable amounts, well explained, motivational and collected and reviewed during class time and used as an occasion for feedback to students" (p. 3). Homework is in reality an interaction between school and the home, and an essential ingredient of the educational process when measuring academic achievement (Harbison & Hanushek, 2012; Alomar, 2006). Stricker and Rock (1995) also conducted an analysis by

assessing the impact of the pupils' initial characteristics (gender, ethnicity, parental education, geographic region and age) and the academic performance. They found that the students‟ initial characteristics have a modest impact on their academic performance and among them parental education is the most significant.

2.3.3.3 Student Engagement

Generally, students' engagement in classroom activities is known to be a major determinant of students' academic achievement (Abubakar, Abubakar & Itse, 2017). According to Lei, Cui and Zhou (2018, p. 517), "student engagement is seen as the active involvement of students in their learning tasks and activities which greatly result in their academic achievement". Student engagement needs the emotional and cognitive involvement of students to enable them attain their goals (Frymier & Houser, 2016). In the classroom, student engagement is mostly spontaneous and natural (Abdullah, Bakar & Mahbob, 2012) even though their engagement may be seen in different forms.

The idea of increasing student engagement is not to have every student participate in the same way or at the same rate, but to provide a conducive atmosphere to enable students have the opportunity to learn and form variety of concepts from varied opinions and in-depth ideas. Thus, student engagement through teamwork assist in addressing many shortcomings or challenges students face, so that they would become more active (Brown, 2012). This supports the argument by Tesfaye and Berhanu (2015) that students are able to learn well when they are engaged, involved cognitively, and are committed to the processes of investigation, discovery, and interpretation.

Zhu (2010) established a significant and relatively strong correlation between students' engagement and their academic achievement. The findings of King's (2015) study, among others, revealed that academic achievement was positively related to student engagement. Lei, Cui and Zhou (2018) report from their study findings that overall student engagement was positively correlated with academic achievement. Mo and Singh (2008) also found out that academic achievement of students was greatly determined by student engagement in classroom activities. Wen, Zhang and Dai (2010) observed and found evidence that a serial relationship existed between student engagement and academic achievement. However, Shernoff and Schmidt (2008) established that student engagement did not predict grade-point average among students. Similarly, Chen, Yang, Bear and Zhen (2013) established no significant relationship between student engagement and academic achievement.

2.3.3.4 Student Discipline

The success of teaching is reflected by academic performance of student. This goal can never be achieved without discipline. Effective discipline helps in the achievement of goals, expectation and responsibility in students (Dunham 1984). The implementation of effective discipline at school is a key for the learner in his journey to adulthood. According to Okumbe (2010), discipline is the action by management to enforce organisational standards. Galabawa, (2001, p. 23) see discipline as "an activity of subjecting someone to a code of behaviour that there is a widespread agreement that an orderly atmosphere is necessary in school for effective teaching and learning to take place". Otieno (2012) argues that discipline in school is a system of guiding the students to make measurable decisions. At the classroom level it means the control of a class to achieve desirable behaviours. Thus good management of

discipline saves substantial resources and time for stakeholders. Therefore, there is a general consensus that the class and subject teachers are bestowed with the responsibility of maintaining proper discipline in classes and the whole school in general and instil the appropriate moral values to the learners. The teacher(s) on duty oversees the students activities in the course of the time allocated while the class teacher sees to it that there is order in their areas of jurisdiction.

Raichena (2006) observed that, good discipline should produce obedience and self-control. A student should be able to control himself/herself and do the right thing at the right time, place and in the right manner. Effective teachers should know that students need to enjoy firm and fair discipline. For their effectiveness to be felt, teachers should begin each day with a positive attitude, have a good class control, let the school activities be learners-centered and keep a record of major issues that arise in their areas of jurisdiction. To enhance the effectiveness of the teachers in their supervisory role, the head teacher and his or her deputy need to lead from the front.

Donga (2007) asserts that adolescents are very sensitive and trying to demean them or force them into doing something they do not like could result in direct confrontation. Thus, teachers by using their position to humiliate and intimidate the learners cause indiscipline. The relationships teachers establish with their students have an influence on the development of self-concept which in turn affects discipline in class. Learners with poor selfconcept are more likely to display unacceptable behavior (Felix, 2011). Teachers who are often absent from school for no good reasons and who do not respond promptly to the bell for example, after break contribute to indiscipline (Donga, 2007).

Socially, teachers' discipline strategies have been suggested to be a potent force to promote students' sense of responsibility in the classroom and to produce more responsible citizens at a grand vision (Lewis, Romi, Qui, & Katz, 2005). Effective teaching research also shows that a sufficient degree of classroom discipline is needed to create an atmosphere conducive to student learning as students' misbehavior distracts the process of learning and teaching and ruins the effectiveness of even the most carefully planned lessons (Barton, Coley &Wenglinsky, 1998).

2.3.3.5 Student Truancy

Truancy could be explained as the act or habit of staying away from school or work without justifiable reasons (Hornsby, 2000). In other words, truancy can be defined as the act or habit of staying away from school without permission. In addition, school attendance has a high correlation with individual academic achievement. The success of a pupil in school is predicated on regular school attendance. According to Allen-Meares, Washington and Welsh (2000) poor attendance such as truancy or unexcused absence from school, cutting classes, tardiness, and leaving school without permission is seen as important in determining pupils' academic achievement.

Heady (2003) argued that there is a negative relationship between student academic achievement and work during school hours. As Akabayashi and Psacharopoulos (1999) found that additional working hours decrease a child's reading and computational ability, whereas with additional hours of school attendance and study the reading and computational ability increased. From their findings, Ray and Lancaster (2003) concluded that time spent at work had negative impact on education variables with marginal impact weakening at higher levels of study hours. Unbalanced

demand of work and education places a physical and mental strain on students and often leads to poor academic performance.

Several researchers have investigated the significant role of pupil attitudes toward learning with regard to their academic achievement. Pupils' attitudes such as absenteeism, truancy, indiscipline, and many others can affect their performance. For instance, McLean (1997) found, by distinguishing between the attitudes of high and low achievers, that five attitudinal factors were significantly related to academic performance. Pupils‟ attitudes may not only directly affect academic achievement, but also may indirectly influence the effect of other factors as well. In another study, Abu-Hilal (2000) found the effect of attitudes on student level of aspiration. Despite the difference between the findings of these two studies, the authors achieved consensus as regards to the significance of attitudes in predicting achievement.

House (1997) and Hassan (2002) further complemented the results of earlier studies, with the former proving that the pupil's initial attitude towards school was significantly related to academic achievement, while the latter found that attitudes predicted the pupil's basic approach to learning. Among one of the personal variables most studied is self-concept, which concerns the group of thoughts and beliefs that a pupil has about his/her academic ability. Self-concept results from the students' internalisation of his social image which is developed from different interactions with the social environments and agents. Great importance is assigned the pupils self-image and the acceptance or rejection by others (Diaz, 2003). This factor has also been investigated by several authors, as regards the relationship between self-concept and academic achievement.

Seaton, Marsh and Parker (2013) investigated the reciprocal relationship between self-concept and academic achievement and found that an individual's present achievement is affected by prior academic self-concept, and that grades had no effect on subsequent academic self-concept. Similarly, Marsh and Yeung's (1997) revealed that prior academic achievement did affect subsequent academic self-concept, and likewise, prior academic self-concept also affected subsequent achievement, with prior achievement being the control. Contrary to these results, Helmke and Van Aken (1995) found that elementary school achievement did not affect prior self-concept. Also, Edwards (2002) found that self-concept better predict performance than variables such as age or student gender.

2.3.4 Home-Related Factors

Literature suggest that home environment and neighborhood factors can influence student attendance and academic achievement (Henry & Huizinga, 2017). Quansah (2017, p. 36) therefore asserts that performing well in school depends on variety of home-related factors including time management, learning resources at home, parental involvement, parental support, and role models at home.

2.3.4.1 Time Management at Home

In the modern world, time is seen as an indefinitely divisible and usable commodity. It helps to infuse the concept of time through the institution. All the material and human resources possessed by organisations can be enhanced in the course of time or be transformed as time goes on; yet the only asset that cannot be changed or purchased or stored is time itself. The secret to achieving success in life is effectively

managing this resource that everyone possesses equally and paying sufficient emphasis to planning (Macan, Shahani, Dipboye & Phillips, 1990).

Though effective and efficient use of time varies with respect to the tasks performed, the further increase in the level of knowledge and skills expected from modern employees has further increased the necessity of time planning. The road to success in social life passes through effective and efficient working which is only possible via time management. The competitive environment we live in today encourages people from as early as their elementary education to plan and manage time effectively. The high performance required by competitive conditions forces organizations and directors to use time effectively and stipulates the search to control time (Alay & Koçak, 2013). Time is to be deemed very substantial to human beings as age and capital; especially that entire human life is made of time segments which mean the second that is gone is going to shorten the human life and make the death nearer. The whole life is a test to see who deserves the paradise in the judgment day, so exploiting the time to fulfill ambitions is of great importance in both worldly life and in the hereafter (Alshawi & Abusultana, 2013, p. 14).

Time management plays a vital role in improving student's academic performance and achievements. Each and every student should have time management ability which includes setting goals & priorities, using time management mechanism and being organized in using time. Here time management is only possible through self-motivation; performance, ability and motivation (Brigitte, Claessens, Eerde & Rutte, 2015). These are the few activities performed by today's students, which act as a

barrier between them and their academic performance. Due to miss management of time they gap behind (Denlinger, 2009).

Time is a resource that affects all aspects of human endeavours. It is a resource that is extremely limited in supply and it is a factor that affects all stakeholders in educational sector-students, teachers, administrators, supervisors and many others. According to Ekundayo, Konwea and Yusuf (2010), instances now abound where students complain of lack of time to do certain things which they would have done. A good student must make effective use of his time to have time for everything he plans to do. Olaniyi (2015) opined that the most important asset a student should possess is the skill in managing his time. Such skill will enable the student to devote a balanced attention to interpersonal relations and production (Ekundayo et al., 2010). In a previous assertion, Sevari & Kandy, 2011) stated that a maximisation of the use of time for academic activities is required to enhance students' academic performances and attitudes.

Again, time management is very worthwhile issue during to being it a key factor in any success at all levels of life and for that the term time management is strongly associated with administrative work. Despite of its importance, it is never an easy task to manage time individually and a need to specific qualifications along with many personal skills is then a must. Let alone exploiting the available resources in order to meet the society and individual needs at the same time and the ability to adjust with the present and future situations (Alghamdi, 2015, p 49). To manage time is another sense of distributing priorities and exert efforts upon that distribution, according to Covey (2014) seven matters a person must give priorities for, as namely; improving

the contacts with others, preparing the activities more effectively, improving the process of managing and planning for the duties, caring for the personal interests, seizing new opportunities, improving the personal skills and information, admitting the power of others.

Also, Macan (2014) explains that, time management is the art of arranging, organising, scheduling, and budgeting one's time for the purpose of generating more effective work and productivity. Gupta (2011) refers time management to a process constituted a series of steps which involves the analysis of our time habits, clarification of objectives, establishment of priorities, planning for appropriate results, keeping records properly, taking positive action against time wasters and avoiding procrastination. Time management is an issue which is fundamental to job performance. The deduction from the foregoing is that time management is focused on solving problems such as inability to deal with distractions, pressure to meet deadlines, procrastination, lack of self-discipline, ambiguity in personal goals, inability to say "no", and excessive social relations.

Subranmanian (2015) observed that numerous literature indicates that academic achievement of students is greatly determined by time management practiced by the students. He adds that when students are given proper guidance on time management techniques, it helps their academic achievements. Pehlivan (2013), found out that a significant positive correlation exist between time management and students grade points average. Similarly, Misra and MaKean (2000) observed from their study that improvement in academic success was as a result of good time management. In a study by Adebayor (2015) on time management and student's academic performance,

established a significant relationship between time management and student academic performance. Nasrula &Khan (2015) also found out that time management was highly related to the academic achievement of students.

2.3.4.2 Learning Resources at Home

Learning resources refer to appropriate quality and adequacy of material resources, physical facilities, and human resources (Akungu, 2014). It could be argued that appropriate and good quality of instructional or learning resources affect student performance. This presupposes that to achieve improvement in the quality, efficiency, and productivity of education, especially at the Junior High School level, appropriate and adequate learning resources are needed not only in the school, but also at home. In other words, to ensure appropriate academic outcomes among students, it is very necessary for the home environment to be conducive and pleasant. This implies that within the home environment, and among family members, it is essential that measures are put in place to enhance effective and cordial relationships and avoid conflicts.

Research has revealed that conflicts are likely to arise among siblings as a result of the use of technology, books, stationery, and other resources (Kapur, 2018). This calls for parents to see to it that children in the home are provided with the basic and essential resources and materials such as reading materials or textbooks, exercise books, pens, pencils, uniforms, school bags, assess to community libraries and civic amenities. Another important aspect is private tuition at home, in case they find some difficulties in understanding concepts in some subjects, and as a result will need assistance. When relevant learning materials are available in the home and the home

environment is also conducive, it encourages children to focus on their studies, and the result is a desired learning outcome. Kapur (2018) argues that financial position of parents, to a large extent, determines the provision of learning resources at home. Financially strong families are more likely to provide their children with almost all the needed learning resources while families with weak socio-economic backgrounds are more likely to find it very difficult to provide learning resources to their children at home. In such a situation, the children have no option than to depend on other means to achieve their goals.

Many studies have been undertaken on the influence of instructional and learning resources on academic achievement. For instance, Momoh (2010) found out that material resources for learning have a significant effect on the academic achievement of students because they help students to learn and understand abstract concepts and ideas, thereby, discouraging rote-learning among students. Adeogun (2001) also established from a study that a very strong positive relationship existed between learning resources and academic achievement. These research findings suggest that homes with more and appropriate learning resources are likely to enhance the academic achievement of children as compared to homes that are less endowed with learning resources.

2.3.4.3 Parental Involvement

Studies have revealed that a positive and significant relationship exist between parental involvement and academic achievement of students (Adetayo & Kiadese, 2011; Ghazi, Riasat, Saqib & Hukamdad, 2010; Muola, 2010). Parental involvement tends to influence children's school achievement. Grolnick and Slowiaczek (2014)

indicated that pupils with parents who are involved in their education tend to have better academic performance than pupils whose parents are not involved in their school. Corroborating this finding, Reynolds and Gill (1994) revealed that a significant relationship existed between parental involvement and academic achievement. Conway and Houtenwille (2008) also found that parental involvement has a strong positive effect on student achievement. Further research shows parental involvement in children's learning not only leads to higher academic achievement, but greater cognitive competence, greater problem solving skills, greater school enjoyment, better school attendance and fewer behavioural problems at school (Melhinsh et al., cited in Ademola & Olajumoke, 2009). Additionally, Tremblay, Ross and Berthelot (2001) found a significant association between students with parents involved at school and their academic achievement.

2.3.4.4 Family Background

Families play a crucial role in the school life of students. The family is relevant and very significant to the well-being of a child as well as his/her later development in life. Family is the first unit in the social order where the child's upbringings began after birth, still in cradle. According to Adewumi et al (2012) childhood could be liken to a letters impressed in the shout of a young tree, which grow, and later enlarge into an integral part of the whole. Sequel to the above, rightful beginning makes the most essential part of every child's upbringing/education. The contribution of the parent to the training of the pupil determines how far he/she will go in life. It is well noted that when the school work together with the family through learning support system, pupils tends to succeed better not just in schools but in life.

The family is an institution as well as an agent of socialization saddle with the responsibility of determining the pupil's attitude towards intellectual, religious, character and moral upbringing. According to Aliyu (2016) the family lays the fundamentals of moral and religious upbringing of the child, and in a way dictate how he/she relate with others regarding the idea of right and wrong, good and bad. Commenting further, Aliyu (2016) asserts that the family unit plays the role of helping the pupils in determining his or her future career pursuit through socializing them into their choice of vocation or a trade for self-reliance, by exposing the child to either pursue the career of the family or any favorable skill before the child grow to become an adult. The family here includes everything that surrounds within the family itself and includes the family background, their socio-economic status, broken home etc.

Mpiluka (2014) intimates that family backgrounds have been of immense significant in determining the academic achievement of a child in schools all over the world. Specifically because academic achievement often time are motivated by the type of people the child interacts with in their early stages in life from their homes. Muola (2010) observed that family background could be likening to all the conditions and circumstances within the family which influences the child physically, intellectually and emotionally as he/she grow up. The Child that grew up from different family backgrounds are affected differently by such family condition, which are the reasons behind why some children have good family background while others have a very poor background. The differences in our family background are some of the consequences in the variation in pupil's academic achievement in school.

It is widely accepted that education is one of the basic requirements for the development of every society. It is also noted that educated parents provide a better and good academic atmosphere for their children. In all parts of the world basic education is the foundation upon which other levels and forms of education are built. For very obvious reasons, this foundation cannot afford to be rickety, shaking and torpid. Many countries in the world have realized that basic education is an integral part of educational process without good academic achievement at this level other facet of the society will be affected. Nyipir (2010) observed that the parents are parts of the current challenge facing the primary school system in the world. This is because the parents have often time fail to do their bid at home and by so doing makes many children even at early stage in life resort to self-help as a result of the fact their parents refuse to give them the needed attention they deserved.

Kapur (2018) suggests that greater parental (family background) involvement at early stage of pupil's learning process positively affects the pupil's performance in school. Although, family background includes other variables such as parental socio-economic status, broken homes, family size and types, parental educational background etc. All these are some of the determinant of family background. Ojo and Yilma (2008) noted that socio-economic status of a family is capable of affecting pupil's behavior and to some extend determines their aspiration in life. They further opined that families having worthy socio-economic status often have more resources in sending their children to school. Most time they usually have access to wide range of ways of providing their children with the needed care, books and also know how to engage them in various learning activities in the house after school. They also have

access to good quality information about their children's wellbeing, as well as their social, emotional and mental development both in school and at home.

Although, Ojo and Yilma (2008) further revealed that parental socio-economic status such as family income level are among some of the major challenges face in the family when it comes to providing best possible care and education for their children. Parental level of education is another key factor that influences pupil academic achievement. The role parental level of education plays cannot be over emphasized. For instance, Mpiluka (2014) argues that students that grew up under parent who are professionals and engaged in managerial occupational backgrounds exhibit higher academic performance than those from dissimilar background. Similarly, family size and type are also linked to high academic achievement. Family size and type to some extent determines the level of attention and time which a pupil gets from their parents. Financial challenges associated with family with larger size and type could be better explained in Okunyi (2004) findings.

A study by Okunyi (2004) revealed that as families increase, parents sometime cannot afford to give their children the same level of attention compare to when the family size is manageable. In a situation that the family size is large parent find it difficult to provide the necessary things needed by the pupil to succeed in School. For example provision of learning aids, comfortable rooms to stay and do their assignment and homework, away from distraction from television, outings to places of interest, holiday trip, opportunity to visits tourist centers etc. On the other hand, Omoruyi (2014) observed that growing up with a single parent family or broken home are always very nerve-racking tasks for both the child and parent. Such families are

bound to be confronted with challenges of inadequate financial resources, lack of care, no love etc.

Schults (2006) opined that if adult from broken homes are to be compared to those from a united family, you will discover that those from a more united family are more socialized, academically and emotional stable than the other. Johnson (2008) lamented that pupils from separated homes (broken home) families often fail in school and sometime, they are exposed to emotionally risk compare to the others. In a sharp contrast Omoruyi (2014) disagree with Johnson (2008) view by saying that this may not be completely applicable in all cases of broken homes. He further opined that some pupils irrespective of home background or structure may work hard to become successful in life. Furthermore, Ayodele (2007) observed that the place where a child grew up himself/herself determining his/her learning ability and ultimately his academic achievement in school.

2.3.4.5 Parental Support

It is proven through studies that low parental socio-economic or income status affect investment in students by their parents, and this eventually influence the students' academic achievement. According to Bjorkman-Nyqvist (2013) it is difficult for parents and families with limited resources to support their children in their academic pursuit, thereby, affecting their (children's) academic achievement. It is also argued that generally, when poverty persists across generations, it results in in low test results of students. However, where there is long-lasting material advantage, students' scores are high (Chukwudi, 2013). Citing Yimusa and Akanle (2008). Quansah (2017) indicates that parental income has been found to be a convincing factor in determining

academic and vocational achievement of secondary school students. This, relatively, affects the psychological balance of students in the classroom, and it results in low concentration, low perception, frustration, sickness, and emotional disability in academic achievement of students (Yimusa & Akanle, 2008; Quansah, 2017).

The deduction from this is that when Junior High School students are denied or deprived of basic but essential needs (textbooks, pens, exercise books, clothing, shelter, nutrition, healthcare, water, sanitation etc.), they are likely to perform abysmally in their academic work at school. This could be the reason for the argument by Bansal, Thind and Jaswal (2006) that a students' retention of what he or she learns is greatly determined by his or her welfare at school. The finding of a study by Fettler (2009) showed that the support of parents given to students in their education is positively and significantly related to students' academic achievement. Similarly, Laeheem (2007) found out that education support of parents was positively and significantly related to students' academic achievement.

2.3.5 Sex and Academic Achievement of Students

Several studies have been conducted on the influence of sex and academic achievement of students. For instance, Gray (1985) also studied gender differences, and concluded that sex differences have been shown to be related to academic success. Fabunmi (2004) investigated the extent to which gender composition influenced the performance of students in secondary schools in Nigeria states of Edo and found that gender was among the factors that influence differences in academic performance of students. Insah, Mumuni and Bowan (2013) concluded from a study

that among others, sex was positively and statistically significant in determining the academic achievement of students.

Similarly, Mwiigi (2014) established from a study that female students had a higher average mean mark than males in the languages of Kiswahili, English and literature, yet boys scored a higher mean average compared to the girls in the science subjects including biology, mathematics and chemistry where performance differentials were highly significant. In the same way, Eze, Ezenwafor and Obi's (2015) study revealed significant difference in students' academic achievement as a result of age and gender. This finding agrees with the findings of earlier studies by Agboola (2006), Owolabi and Ekuk-Irien (2009), and Zember and Blume (2011) who reported that age and gender have effects on academic achievement of students in Mathematics, science and ICT. The findings however disagreed with that of Ganai and Muhammmad (2013) which revealed that linear relationship exists between the independent variable (students CGPA) and the dependent variables (age and gender) and that gender did not have any significant effect on the students' academic achievement. Voyles (2011) also found out from a study that sex of students was not a factor considered for student academic achievement.

2.4 Conceptual Framework

A conceptual framework enables the researcher to find links between the existing literature and his own research goals (Haralambos & Holborn, 2008). Figure 1 shows the conceptual framework for the study on determinants of academic achievement among public Junior High School students in the Effutu Municipality. It could be seen from Figure 1 that the independent variable was made up of four perceived

components of academic achievement of students: teacher, school environment, students and home related factors which could contribute to the one perceived dependent variable (academic achievement).

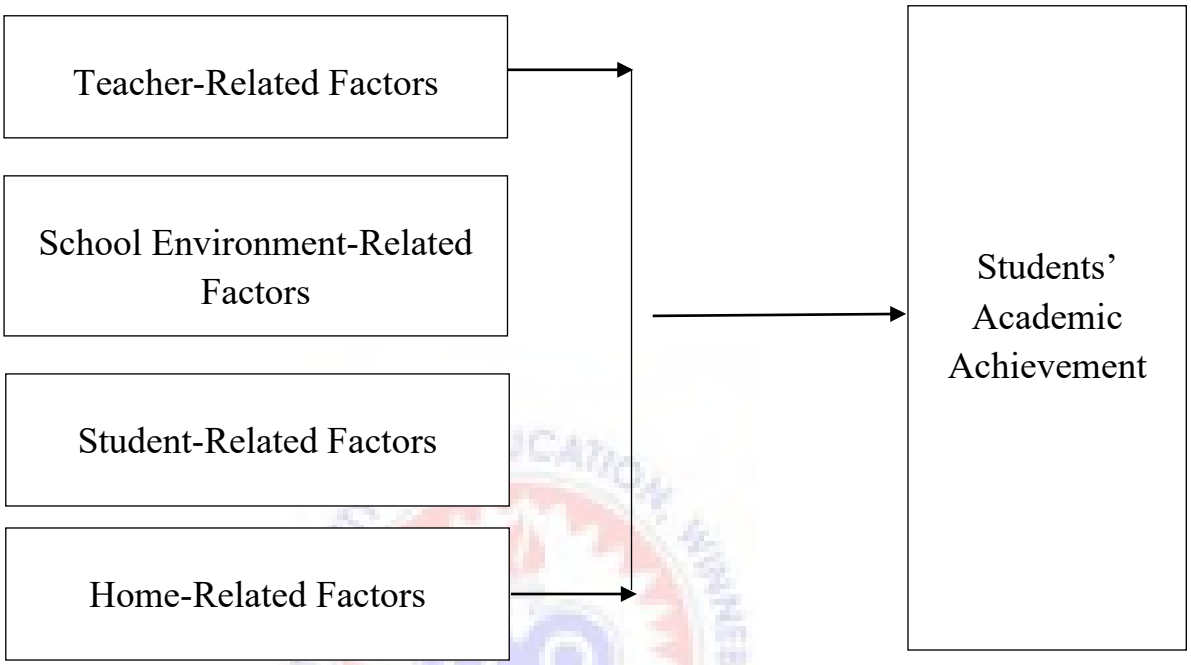

Figure 1: Researcher's Conceptual Framework

The model underpins the belief that the quality of input largely determines the quality of output (academic achievement), as expressed by Acato (2006) and Quansah (2017). The model or diagramme reveals a link between varied factors and academic achievement, and it shows the direct relationship between the dependent variable (academic achievement) and the independent variables namely teacher-related factors, school environment-related factors, student-related factors, and home-related factors.

2.5 Summary

The study was based on Urie Bronfenbrenner's Ecological Systems Theory. This theory attempts to define and understand human development within the context of

the system of relationships that form the person's environment. According to Bronfenbrenner's initial theory (1989), the environment, is comprised of four layers of systems which interact in complex ways and can both affect and be affected by the person's development. These are Microsystems, Mesosystem, Ecosystems and Macrosystem. He later adds a fifth dimension that comprises an element of time (Bronfenbrenner, 1995) which he called Chronosystem.

The review of literature also discussed the meaning of the concept academic achievement and the determinants of academic achievement. These determinants discussed under this study were teacher-related factors (teacher-related factors, school environment-related factors, student-related factors, and home-related factors), school environment related factors (instructional materials, class size, school facilities, effective supervision), student-related factors (student motivation, student effort, student participation, student truancy, student discipline), and home-related factors (parental involvement, role models at home, learning resources at home, parental support). Results of empirical studies which relate to the factors identified were also discussed. Most of these studies showed that the various factors identified for this study greatly determined the academic achievement of students. The influence of sex on academic achievement of students was also discussed.

CHAPTER THREE

METHODOLOGY

3.0 Overview

Conducting research demands that certain processes and procedures should be followed. Research methodology therefore emphasises the procedures followed in conducting research, and the justification for using these procedures (Creswell, 2014). This chapter focuses on the methodology employed in carrying out the research by discussing the philosophy underpinning the choice of research design, population of the study, sample and sampling techniques, and instruments for the data collection. It further looks at the validity and reliability of the instruments, the procedure for collecting data and the data analysis, and ethical considerations.

3.1 Philosophical Underpinnings

Research philosophy has been considered as a researcher's view of the world, and the assumptions they make about social realities (Saunders, Lewis & Thornhill, 2012). A researcher's philosophy for a particular research study depends on how he or she sees reality vis-à-vis his or her view of knowledge and how knowledge is obtained (Creswell, 2012). Therefore, the philosophical stance of a researcher mirrors his or her understanding of what social reality is made up of, and what makes authentic knowledge, as well as the processes and procedures to arrive at that knowledge (Sefah, 2018).

Philosophy of research has been classified in different ways depending on the opinion of the researcher. Bryman (2008) classifies the philosophy of research into epistemology and ontology. Creswell (2014) explains epistemological perspective as

the means through which knowledge is gained, which absolutely depends on the relationship between researchers and how they perceive social reality. Two research epistemologies identified by Bryman (2008) are positivism and interpretivism. Under the positivist epistemological perspective, only authentic knowledge is obtained from structured and controlled procedures as seen in the natural sciences like Physics, Chemistry, and Biology. This suggests that knowledge gained could be considered reliable when planned and rigid processes are considered and followed by researchers. The interpretivist philosophy on the other hand, considers that human interactions and social behaviours are complex and dynamic, and as a result, knowledge is created by interpreting these social constructs (Saunders et al., 2012). This implies that researchers who adopt the interpretivist philosophy cannot adopt structured procedures to obtain knowledge.

Considering the ontological philosophy, Eriksson and Kovalainen (2008, p. 13) state that "the ontological philosophy concerns the ideas about the existence of and relationship between people, society and the world in general". Bryman (2008) identified two types of ontology as objectivism and constructionism. According to Cohen, Manion and Morrison (2011), objectivism ontological philosophy argues that social reality is "out there", external and independent of the researched, and therefore it can be obtained through natural scientific approaches in physics, chemistry and biology that are objective in nature. Hence, the researcher is seen as a distant observer of social phenomena where instruments like structured questionnaires, non-participant observation guides and checklists are relied on. However, the constructivist ontological philosophy, as indicated by Saunders et al. (2012) sees reality as the

creation of the researched, and their existence depends on the researcher's subjective awareness and experiences.

This means that a researcher needs to interact with the research participants in order to understand and interpret social reality from the opinion of the research participants. With this, the researcher could make use of research instruments such as open-ended and semi-structured interview guides, as well as participant observation protocols. This study, however, adopted the positivist epistemology and objectivist ontology. The reason for this was that the researcher used questionnaire to collect and analyse quantitative data. Hence, planned and rigid procedures were followed in obtaining data from the respondents used for the study.

3.2 Research Design

The design adopted by the researcher for a study is referred to as an outline or a master plan which shows the procedure used in gaining knowledge by finding answers to the questions posed to guide the research. Research design describes the conceptual structure in which research is conducted and this constitutes logical sequence, the blue print for data collection, analysis of data and measurement of variables used in the study (Sekaran, as cited in Sefah, 2018). Thus, the procedures and processes used by a researcher to collect, analyze, and interpret data in a research study are collectively known as research design.

Descriptive quantitative correlational survey design was employed for the study. Descriptive design is a form of planned collection of data from a large population for the purpose of analyzing the relationships between variables (Lodico, Spaulding, &

Voegte, 2010). In the view of Seidu (2007), a descriptive survey is a method for systematically obtaining uniform information about the perception, attitudes and any other characteristics of a target population. According to Ghost (1992), descriptive survey involves the collection and interpretation of data with the aim of making generalization from a sample to a large population and so by asking a good number of people with a known background of the same questions, it is possible to get a broad and accurate presentation. Furthermore, Howitt and Cramer (2008, p. 28) uphold the relevance of descriptive research to this study when they said, "it allows one to find out significant information about an existing situation". The descriptive survey design was found to be suitable it could be used to collect large amount of information within a short time. The choice of the design was informed by Kothari, (2011), who stated:

> *Descriptive research is concerned with conditions or relationship that exists; practices that prevail; beliefs, points of view or attitudes that are held; processes that are going on; effects that are being felt; or trends that are developing. At times, descriptive research is concerned with how what is or what exists is related to some preceding event that has influenced or affected a present condition or event (p.70).*

The approach adopted for the study was quantitative in nature. The quantitative research methodology involves data collection procedure such as the use of questionnaire or data analysis procedure such as descriptive statistics that generates or uses numerical data in a research. According to Harwell (2011) the quantitative method specifically makes use of statistical methods, models and numeric data to test hypothesis, draw inferences and comparisons between variables, and makes generalizations from the results. Again, the study was correlational because it sought to investigate how teacher-related, school environment-related, student-related, and home-related factors determine the academic achievement of students in public Junior High Schools in the Effutu Municipality, Ghana. Correlational research approach is

the measurement of two or more factors to determine or estimate or estimate the extent of a relationship between two or more variables (Creswell, 2014; Bryman & Bell, 2012). From the definition, correlational study seeks to identify and interpret the relationship between and among a number of facts. Hence, correlational approach to research examines differences of characteristics or variables of two or more entities. In view of these, the design adopted was deemed appropriate to achieve the purpose of the study.

3.3 Population of the Study

According to Patton (2002), population of a study is the larger group upon which a researcher wishes to generalize. It includes members of a defined class of people, event or object. The target population for the study was all teachers and students in public and private Junior High Schools (JHSs) in the Effutu Municipality. The accessible population for this study comprised all students and teachers in public JHSs in the Effutu Municipality. At the time of conducting the study, records obtained from the Effutu Municipal Education Directorate showed that there were 3,551 students in the JHs in the Municipality. This was made up of 1,787 males and 1,764 females. The report further showed that there were 238 teachers in public JHSs, and this was made up of 118 males and 120 females. Hence, the total population for the study was 3,789.

3.4 Sample

A research sample can be defined as a group of relatively smaller number of people selected from a population for investigation purpose (Alvi, 2016). It is also seen as a subject of a population that is used to study the population as a whole (Schutt, 2009). The sample for the study was five hundred and eighty-five (585) public Junior High

School (JHS) students, and one hundred and four (104) professional public Junior High School (JHS) teachers from the Effutu Municipality. Hence, the total sample for the study was six hundred and eighty-nine (689) respondents.

3.5 Sampling Techniques

Sampling techniques are method used in selecting a sample. According Krishnaswami (2004), sampling techniques are classified into two types, probability and non-probability sampling. For this study, stratified sampling and census sampling techniques were used. The Effutu Municipality was stratified into three groups based on the three education circuits, namely, Effutu East, Effutu Central, and Effutu West. Five (5) public Junior High Schools were randomly sampled from Effutu East, four (4) public Junior High Schools each were randomly sampled from Effutu West, and another four (4) were randomly sampled from Effutu Central educational circuits. This implies that thirteen (13) public Junior High Schools were obtained from the Effutu Municipality for the study. For the student respondents, fifteen (15) students were randomly sampled from each of the three levels of the public Junior High School section of each of the thirteen (13) randomly selected schools. Thus, forty-five (45) student respondents were sampled from each of the identified schools for the study. In obtaining the teacher respondent sample, all professional teachers in the Junior High School section of the thirteen (13) sampled schools were purposively selected for the study.

3.6 Research Instruments

Questionnaire was the instrument used to collect data for the study. According to Seidu (2007) a questionnaire is a form of enquiry document which is made up of a

systematically compiled and well organized series of questions aimed at eliciting information to give an insight into the nature of a problem under study. The questionnaire was used as an instrument in collecting data for study because Saunders, Lewis, and Thornhill (2012) argue that it provides an efficient way of collecting responses from a large sample at a given time limit. Apart from it being an efficient way to collect statistically quantifiable information, the questionnaire is also seen as more reliable while its anonymity encourages a greater degree of honesty (Cohen et al., 2011).

Two sets of questionnaire, one each for the students and teachers, were designed by the researcher and used to collect data for the study. In designing the questionnaire, the researcher was informed by the literature reviewed for the study. The students' questionnaires was made up of three (3) sections. Section A was on the bio-data of the respondents, Section B was on the factors that influence academic achievement of students in Junior High Schools in the Effutu Municipality, and Section C talked about the students' academic achievement. The teachers' questionnaire was made up of two sections. While Section A looked at the bio-data of the teachers, Section B was on the factors that influence academic achievement of students in Junior High Schools in the Effutu Municipality.

The factors that influence student academic achievement were categorised under, teacher factors, school environment factors, student factors, and home environment factors. For the items under Section B for both sets of questionnaire, responses to each item ranged from Strongly Disagree (1), Disagree (2), Not Sure (3), Agree (4), to

Strongly Agree (5). Respondents were required to select one response to each item to reflect their opinion on the statements.

In other to check the reliability and validity of the instruments (Creswell, 2014) a pre-test was carried out in two public Junior High Schools at Awutu Breku, a town with similar features as the Effutu Municipality. The reason for the choice was the fact that they have similar characteristics with that of public Junior High Schools in the Effutu Municipality. Again, to avoid the interaction effect (Kusi, 2012; Kothari, 2011) among the teachers in public Junior High Schools in the Effutu Municipality, it was prudent to pilot-test the instruments in two public Junior High Schools at Awutu Breku.

3.6.1 Validity of the Instruments

Validity is the most important consideration in developing and evaluating of measuring instruments. (Ary et al, 2002). Validity is the extent to which a measuring instrument (like a questionnaire) really measures the characteristic it intends to measure (Leedy & Ormrod, 2005). Cohen, Manion, and Morrison (2012) contend that a research instrument must be validly designed to obtain rigorous conclusions. It is used to determine if an instrument measures what is intended to be measured. Validity explains how well the collected data covers the actual area of investigation. Mugenda and Mugenda (2003) therefore define validity as the accuracy and meaningfulness on interferences which are based on the research results. In other words validity is the degree to which results obtained from the analysis of the data actually represent the phenomena under study.

The validity of the instruments was approached by face and content validation. Face validity of the instruments were done by giving the designed instruments to my colleague M.Phil. Basic Education students for them to consider the structure, layout, alignment and configuration of the instruments in relation to the research questions. Content validity refers to the extent to which the measuring instrument shows that it fairly and comprehensively covers the variables that it purports to measure (Cohen et al., 2012). Borg and Gall (2003) argue that content validity of an instrument is improved through expert judgment. The content validity of the instruments was granted by supervisors and other lecturers who are experts and have knowledge in the issues of the study. Comments from my supervisors and other lecturers helped in improving the items in the questionnaires before administering them.

3.6.2 Reliability of the Instruments

Reliability refers to the consistency across the parts of a measuring instrument. (House, 2007). It refers to the consistency of results if a study is repeated, and it is also concerned with stability, internal reliability and inter-observer consistency (Bryman & Bell, 2012). In this study, reliability of the questionnaires was treated as internal consistency of the items in the two sets of questionnaires. As such, Cronbach Alpha was computed to determine the reliability based on data collected from the pre-test. In calculating the Cronbach Alpha, the data obtained from the pre-test were coded and keyed into Version 20 of Statistical Product for Service Solution (SPSS), and analysed. The Cronbach alpha co-efficient for teacher factors was 0.74 for students' questionnaire and 0.77 for teachers' questionnaire, school environment factors recorded 0.81 for the students' questionnaire and 0.79 for the teachers' questionnaire, student factors obtained 0.78 for students' questionnaire and 0.83 for

teachers' questionnaire, while home environment factors yielded 0.76 for students' questionnaire and 0.75 for teachers' questionnaire.

The implication is that the reliability of the instruments for each of the identified factors that influence academic achievement of students in public Junior High Schools in the Effutu Municipality exceeded a Cronbach alpha co-efficient of 0.7 and as such, were in line with the suggestion by McMillan and Schumacher (2010) that reliability of a questionnaire should be 0.7 or more. According to Chua (2013) the alpha value of 0.65 to 0.95 is satisfactory for Cronbach's alpha reliability of an instrument. Similarly, Dörnyei and Taguchi (2010) contend that the acceptable range for Cronbach's alpha reliability of a questionnaire should be more or equal to 0.70. Based on these recommendations, it could be deduced that the instruments used for the study were reliable.

3.7 Data Collection Procedures

Permission from the school authorities and participants was sought using an introductory letter from the Head of the Department of Basic Education, University of Education, Winneba, which was approved by the Director of the Effutu Municipal Directorate of the Ghana Education Service (GES). On an agreed date and time for the administration of the instruments in each school, respondents (teachers and students) were briefed on the purpose of the study. Explanation on how to respond to the questionnaires were given to participants. The respondents were fully assured of confidentiality and as such, were encouraged to respond to the items to the best of the knowledge, opinion and experience, without any fear or anxiety. These were done after the students and teachers were randomly sampled.

With the assistance of the teachers, the researcher administered the questionnaires to the student respondents who filled and return them immediately. After collecting the data from the students, the sampled teachers were also given their questionnaire to complete and return them to the researcher. The presence of the researcher in each of the thirteen (13) sampled schools on the day of administering the questionnaire helped to clarify issues that arose. As a result, the respondents (both teachers and students) did not face much difficulty in responding to the items in the questionnaire.

3.8 Data Analysis Plan

Creswell (2012) indicates that data analysis is a process where a researcher continually reflects on collected data, moving deeper for understanding and representing the data, and deriving an interpretation of the larger meaning of the data. In analysing the data, the researcher started by checking all the filled-in questionnaires so that those that were not properly answered or not answered at all were not used for the analysis. The data were coded, and entered into Version 20 of the Statistical Product for Service Solution (SPSS). Descriptive and inferential statistics were used to analyze the data. Descriptive statistics (mean, standard deviations) was used for the analysis of demographic data. Borg and Gall (2003) argue that descriptive statistics not only allows the researcher to use numbers, but also provides the researcher with data that allow for inferences on the population and directions for answering research questions. Descriptive statistics (frequency and percentage) were used to analyse the demographic variables. The Pearson Correlation was used to analyse Research Questions 1 and 4, while the Multiple Regression was used in analysing Research Questions 2 and 3.

3.9 Ethical Considerations

Research ethics is "the standard of the researcher's behaviour in relation to the rights of those who become the subject of a research project, or who are affected by it" (Saunders et al., 2012, p. 680). Bless and Higson-Smith (2000) consider the ethical rights of a participant to be the right to privacy and voluntary participation, anonymity, and confidentiality. Gray (2009) therefore insists on the need of the researcher to observe the principle of ethics when conducting research. This is because there could be some danger or harm the respondents may experience if their views are made known to other people, especially, superiors at the work place. Participation in research must be voluntary, and participants must have the option to refuse to divulge certain information about them (Bless & Higson-Smith, 2000). The researcher explained the purpose and nature of the research and the extent of their involvement in the study. Respondents were also informed of their right to withdraw at any time, and all participants gave their consent to participate in the study.

Babbie (2001) contends that a respondent is considered anonymous when he or she cannot be identified by the researcher with a given response. Thus, consideration for anonymity can be easily overcome by omitting the names of respondents or identifying the respondents by a code instead of by name. Research, in most cases, requires respondents to show personal information that may be a secret to their friends and associates. Many people are, however, prepared to divulge this information of a very private nature on condition that their names are not mentioned. Therefore, anonymity was ensured by not creating a space for respondents to write their names. Again, the final report did not have names of respondents. Another ethical consideration is that of confidentiality. The participants must be assured that the data

will only be used for the stated purposes of the research and that no other person will have access to the research data (Bless & Higson-Smith, 2000). In light of this, the participants were assured that the research data would be used solely for the purpose of the research, and that no information would be made public without their prior consent.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Overview

This chapter is assigned to the presentation of results and their discussion. The chapter is organized into four subsections. Section one presents and discusses the response rate, and the second section examines the demographic composition of the sample. The data presentation on the research questions is done in the third section, and finally, the discussion is done in the fourth section.

4.1 Response Rate

A total of six hundred and eighty-nine (689) questionnaires comprising 585 for students and 104 for teachers were administered. However, 660 were retrieved for analysis. Out of the 660 questionnaires, 560 questionnaires were from the students while the remaining 100 questionnaires were from the teachers. Therefore, the response rate for the teachers was 96.2% while 95.7% response rate was realized for the students.

Generally, the study attained a response rate of 95.8%. This response rate was realized because nineteen (19) questionnaires from the students had many missing data which could distort the findings if they were involved in the analysis while six (6) questionnaires were not answered. For the teachers, four (4) questionnaires were not returned in spite of numerous attempts by the researcher to retrieve them. However, this response rate was considered appropriate for the study based on the suggestion of Babbie (2004) that a response rate of 50% is adequate in surveys.

4.2 Demographic Features of Respondents

This section of the study was divided into two sub-sections. The first part examined the demographic composition of the teachers while the second part discussed the demographic features of the students. The demographic compositions of the teachers are presented in Table 2.

Table 2: Demographic Information of Teachers

Variables	Categories	Frequency (n)	Percentage (%)
Gender	Male	49	49.0
	Female	51	51.0
Marital Status	Single	40	40.0
	Married	58	58.0
	Divorced	2	2.0
Age	20-30	28	28.0
	31-40	42	42.0
	41-50	25	25.0
	51 And Above	5	5.0
Education Level	Diploma	23	23.0
	Degree	63	63.0
	Masters	14	14.0
Rank	Senior Supt. II	22	22.0
	Senior Supt. I	7	7.0
	Principal Superintendent	50	50.0
	Assistant Director II	14	14.0
	Assistant Director I	4	4.0
	Deputy Director	3	3.0
Years Of Experience	1-5	29	29.0
	6-10	28	28.0
	11-15	17	17.0
	16-20	26	26.0

Source: Fieldwork Data, 2019

As indicated in Table 2, more female teachers (n=51, 51.0%) than male teachers (n=49, 49.0%) were involved in the study. The information further revealed that more than half of the teachers were married (n=58, 58.0%) while the rest were those who were single (n=34, 34.0%) and divorced (n=8, 8.0%). Concerning age, the findings showed that most of the teachers who participated in the study were 31-40 years (n=42, 42.0%) than those who fell between 20-30 years (n=28, 28.0%), 41-50 years

(n=25, 25.0%) as well as those who were 51 years and above (n=5, 5.0%). The distribution of the respondents on academic qualification revealed that 63 respondents representing 63.0% had degree, 23 respondents representing 23.0% were diploma holders, and the remaining respondents had master's degree (n=14, 14.0%).

In terms of their rank, the information showed that half of the teachers were at the Principal Superintendent rank (n=50, 50.0%), 22 teachers representing 23% were at the rank of Senior Superintendent II, 14 teachers representing 14% were at the Assistant Director II rank, 7 teachers representing 7% were at the Senior Superintendent I rank, 4 teachers (n=4%) were at Assistant Director I rank while the rest 3 teachers representing 3% were Deputy Directors. The composition of the respondents by work experience showed that more most of the respondents had 1-5 years of work experience (n=29, 29.0%) as compared to those with 6-10 years (n=28, 28.0%), 16-20 years (n=26, 26.0%), and 11-15 years (n=17, 17.0%).

The demographic representations of the students were also investigated, and the results are shown in Table 3. The information disclosed that more students in JHS 1 participated in the study (n=191, 34.1%) as compared to their counterparts in JHS 3 (n=187, 33.4%) and JHS 2 (n=182, 32.5%). The information further showed that more female students (n=281, 50.2%) than male students (n=279, 49.8%). In terms of age, the study indicated that 267 students representing 47.7% were in the 11-14 age bracket, 224 students representing 40.0% were between 15-18 years, and the rest 69 students constituting 12.3% were above 18 years. Furthermore, it was observed that majority of the students live with both of their parents (n=230, 41.1%) than those who

live with their mothers only (n=173, 30.9%), other relatives (n=61, 10.9%), guardians (n=56, 10.0%), and fathers only (n=40, 7.1%).

Table 3: Demographic Information of Students

Variables	Categories	Frequency	Percent
Form	JHS 1	191	34.1
	JHS 2	182	32.5
	JHS 3	187	33.4
Sex	Male	279	49.8
	Female	281	50.2
Age	11-14	267	47.7
	15-18	224	40.0
	Above 18	69	12.3
Who are you staying With?	Both Parents	230	41.1
	Mother Only	173	30.9
	Father Only	40	7.1
	Guardian	56	10.0
	Other Relatives	61	10.9
Parents' Level of Education	No Education	203	36.3
	Pre-tertiary	307	54.9
	Tertiary	50	8.9
Father's Occupation	Government	104	18.6
	Private	456	81.4
Mother's Occupation	Government	80	14.3
	Private	480	85.7

Source: Fieldwork Data, 2019

Besides, the study showed that more than half of the students had parents who possessed pre-tertiary education (n=307, 54.9%) while the remaining students had parents who had no education (n=203, 36.3%) and tertiary education (n=50, 8.9%) respectively. Additionally, the statistics showed that more than two-thirds of the students had fathers who were employed in the private sector (n=456, 81.4%) while the rest 104 students representing 18.6% had fathers who were employed in the government sector. Finally, the study had proven that 480 mothers representing 85.7% were engaged in the private sector as compared to those who had employment in the private sector (n=80, 14.3%).

The demographic distributions of the respondents were crucial to the study because they showed that data were collected from respondents with diverse backgrounds, thereby making the data rich and devoid of bias. In this way, the authenticity of the data and their findings were enhanced. Furthermore, the demographic factors like students' sex, parental education level, and parental marital status assisted in determining the extent to which these factors influenced the academic achievement of the students so as to provide answers to the study's hypotheses.

4.3 Analysis and Presentation of Findings

Research Question 1: What teacher-related factors determine academic achievement of students in in public Junior High Schools in the Effutu Municipality?

The aim of this research question was to investigate the relationship between teacher-related factors and students' academic performance in the Effutu Municipality. The Pearson correlation was used to provide answers to this research question, and the interpretation of the correlation coefficients was based on Peck and Devore's (2012) view which indicated that coefficients less than 0.50 represent a weak relationship, coefficients greater than 0.50 but less than 0.80 represent a moderate relationship, and coefficients greater than 0.80 represent a strong relationship.

The results of the analysis are presented in Table 4 and the findings revealed that all the teacher-related factors outlined in the study related positively and statistically significant with students' academic achievement. Indeed, the result showed that there was a weak but statistically significant positive relationship between teacher adequacy and student academic attainment ($r=0.30$, $p<0.05$, 2-tailed). It was also established

that there was a weak but statistically significant positive relationship between teacher commitment to work and student academic achievement (r=0.32, p<0.05, 2-tailed). Again, the study disclosed that there was a moderate and statistically significant positive relationship between teacher-student relationship and student academic achievement (r=0.69, p<0.05, 2-tailed).

Table 4: Pearson Correlation Matrix for Teacher-Related Factors and Students' Academic Achievement

	Variables	1	2	3	4	5	6	7	8	9	10
	Mean	3.48	3.52	4.21	3.83	3.48	50.52	48.21	49.83	50.48	49.76
	Standard Deviation	0.45	0.84	0.67	0.29	0.64	0.33	0.28	0.47	0.56	0.41
1	Teacher Adequacy	1									
2	Commitment of Trs	0.25*	1								
3	Teacher-student Rel.	0.05	0.44*	1							
4	Teacher Competence	0.41*	0.67*	0.20*	1						
5	Teacher Support	0.55*	0.48*	0.75*	0.87*	1					
6	English Score	0.53*	0.53*	0.58*	0.39*	0.33*	1				
7	Maths Score	0.57*	0.58*	0.62*	0.75*	0.41*	0.62*	1			
8	Int. Science Score	0.51*	0.54*	0.59*	0.61*	0.53*	0.56*	0.33*	1		
9	Social Studies	0.54*	0.52*	0.20*	0.44*	0.55*	0.31*	0.49*	0.57*	1	
10	Overall Aca. Atta.	0.30*	0.32*	0.69*	0.79*	0.40*	0.43*	0.67*	0.71*	0.78*	1

*Correlation is significant at p< 0.05 (2-tailed); Source: Fieldwork Data, 2019

The relationship between teacher competence and students' academic attainment was found to be moderate and statistically significant (r=0.79, p>0.05, 2-tailed). Furthermore, the study showed that the relationship between teacher support for students' learning and students' academic achievement was weak but positive and statistically significant (r=0.40, p>0.05, 2-tailed). These results implied that the teacher-related factors contained in this study were crucial in enhancing the academic achievement of the students. In essence, an improvement in the quality of these factors is probable to boost the academic achievement of the students. However, a reduction in the quality of these factors is likely to lead to a corresponding drop in the

academic achievement of the students. The study further examined the relationship between each of the teacher-related factors and the subjects involved in the study. The findings revealed that there were moderate and statistically significant relationships between teacher adequacy and students' academic achievement in English Language ($r=0.53$, $p>0.05$, 2-tailed), Mathematics ($r=0.57$, $p>0.05$, 2-tailed), Integrated Science ($r=0.51$, $p>0.05$, 2-tailed), and Social Studies ($r=0.54$, $p>0.05$, 2-tailed) respectively.

Likewise, there were moderate and statistically significant positive relationships between teacher commitment and students' academic achievement in English Language ($r=0.53$, $p>0.05$, 2-tailed), Mathematics ($r=0.58$, $p>0.05$, 2-tailed), Integrated Science ($r=0.54$, $p>0.05$, 2-tailed), and Social Studies ($r=0.52$, $p>0.05$, 2-tailed) respectively. Besides, the relationships between teacher-pupil relationship and students' academic attainment in English Language ($r=0.58$, $p>0.05$, 2-tailed), Mathematics ($r=0.62$, $p>0.05$, 2-tailed), Integrated Science ($r=0.59$, $p>0.05$, 2-tailed) were moderate, positive, and statistically significant, but the relationship between teacher-student relationship and Social Studies was weak but positive and statistically significant ($r=0.20$, $p>0.05$, 2-tailed). The findings further pointed out that there were moderate and statistically significant relationships between teacher competence and students' academic attainment in mathematics ($r=0.75$, $p>0.05$, 2-tailed), and Integrated Science ($r=0.61$, $p>0.05$, 2-tailed), yet the relationships between teacher competence and students' academic attainment in English Language ($r=0.39$, $p>0.05$, 2-tailed), and Social Studies ($r=0.44$, $p>0.05$, 2-tailed) were weak but positive and statistically significant.

It was discovered that there were moderate and statistically significant relationships between teacher support and students' academic attainment in Mathematics ($r=0.75$,

p>0.05, 2-tailed), and Integrated Science (r=0.61, p>0.05, 2-tailed), but the relationships between teacher support and students' academic attainment in English language (r=0.39, p>0.05, 2-tailed), and Social Studies (r=0.44, p>0.05, 2-tailed) were weak but positive and statistically significant. Based on these results, it was evident that besides the positive and statistically significant relationship between teacher-related factors and the overall academic achievement, the individual teacher-related factors related significantly with the students' academic achievement in each subject.

Research Question 2: What school environment-related factors contribute to academic achievement of students in public Junior High Schools in the Effutu Municipality?

The second research question investigated the extent to which school environment factors contributed to students' academic achievement. The school environment factors included in the analysis were instructional materials, school facilities, class size, conducive school environment, and effective supervision. The multiple regression was used to analyze the data, and the results are presented in Table 5. The multiple regression results revealed that school environment factors such as instructional materials, school facilities, class size, conducive school environment, and effective supervision collectively contributed 57.4% of the variance in the students' academic achievement which was found to be statistically significant [F (5, 684) =148.6241, p<0.05]. The implication is that other school environment-related factors not included in the study contributed to 42.6% of the variance in students' academic achievement. It is inferred from this result that generally school environment-related factors were good predictors of students' academic achievement in public Junior High Schools in the Effutu Municipality.

Table 5: Multiple Regression Results for School Environment-Related Factors Contributing to Students' Academic Achievement

					Change Statistics				
Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	R^2 Change	F Change	df1	df2	Sig. F Change
1	0.758	0.574	0.571	0.380	0.574	184.241	5	684	0.000

Source: Fieldwork Data, 2019 (p = 0.05)

The study further examined the influence of each predictor on the academic achievement of the students, and the results are presented in Table 6.

Table 6: Standardized and Unstandardized Coefficients for School Environment-Related Factors Contributing to Students' Academic Achievement

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tol.	VIF
(Constant)	1.523	0.046		32.87	0.000		
Instructional Mat.	0.071	0.031	0.115	2.260	0.024	0.242	4.137
Class Size	0.144	0.032	0.240	4.541	0.000	0.222	4.500
School Facilities	0.152	0.029	0.264	5.249	0.000	0.247	4.045
Effective Sup.	0.106	0.030	0.171	3.559	0.000	0.270	3.697
Conducive Sch. Env.	0.022	0.025	0.038	0.877	0.381	0.333	3.007

Source: Fieldwork Data, 2019 (p = 0.05)

The results in Table 6 showed that out of the five school environment factors, it was discovered that instructional materials (β=0.115, t=2.260, $p<0.05$), class size (β=0.240, t=4.541, $p<0.05$), school facilities (β=0.264, t=5.249, $p<0.05$), and effective supervision (β=0.171, t=3.559, $p<0.05$) individually contributed significantly to students' academic achievement while the contribution of conducive school environment on students' academic achievement was not significant (β=0.038, t=0.877, $p>0.05$). In order of magnitude, it was revealed that school facilities, class size, effective supervision, and instructional materials contributed uniquely to students' academic achievement. Therefore, the study concluded that school environment factors such as school facilities, class size, effective supervision, and

instructional materials were critical in determining the academic achievement of students in public junior high schools in the Effutu Municipality.

Research Question 3: What student-related factors account for academic achievement of students in public Junior High Schools in the Effutu Municipality?

The third research question examined the extent to which student factors accounted for their academic achievement in public junior high schools in the Effutu Municipality. Five student-related factors were outlined in this study which included student effort, student discipline, student engagement, student motivation, and student truancy. To provide answers to this research question, the multiple regression was employed, and the results are presented in Table 7.

Table 7: Multiple Regression Results for Student-Related Factors Accounting for their Academic Achievement

					Change Statistics				
Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	R^2 Change	F Change	df1	df2	Sig. F Change
1	0.875[a]	0.765	0.763	0.480	0.765	445.793	5	684	0.000

Source: Fieldwork Data, 2019 (p = 0.05)

The multiple regression results in Table 7 revealed that student-related factors collectively contributed 76.5% to student academic achievement which was considered to be statistically significant [F (5, 684) =445.793, p<0.05]. This result implied that other factors not included in this study were accountable for 23.5% influence on the academic achievement of the students. Therefore, it was concluded that student factors were good determinants of students' academic achievement in public junior high schools in the Effutu Municipality.

The study further delved into the contribution of each student factor on the academic achievement, and the results are presented in Table 8. It is observed from the data in Table 8 that the multiple regression results showed that student motivation (β=0.854,

t=2.215, p<0.05), student effort (β=0.293, t=2.557, p<0.05), student engagement (β=0.961, t=23.667, p<0.05), and student truancy (β=0.176, t=2.769, p<0.05) contributed significantly to student academic achievement while student discipline did not make an individual significant contribution to academic achievement (β=0.043, t=0.753, p>0.05). It is deduced from these results that student-related factors such as student participation, student motivation, student effort, and student truancy are critical factors to be considered in improving the academic achievement of the students.

Table 8: Standardized and Unstandardized Coefficients for Student-Related Factors Accounting for their Academic Achievement

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tol.	VIF
(Constant)	-0.352	0.101		3.484	0.001		
Student Motivation	0.094	0.043	0.854	2.215	0.027	0.233	4.283
Student Effort	-0.109	0.043	0.293	2.557	0.011	0.262	3.816
Student Engagement	1.091	0.046	0.961	23.667	0.000	0.208	4.801
Student Discipline	0.081	0.107	0.043	0.753	0.452	0.107	9.339
Student Truancy	-0.116	0.042	0.176	2.769	0.006	0.456	2.194

Source: Fieldwork Data, 2019 (p = 0.05)

Research Question 4: What home-related factors determine academic achievement of students in public Junior High Schools in the Effutu Municipality?

In relation to the fourth research question, the study investigated the relationship between home-related factors and students' academic achievement in public junior high schools in the Effutu Municipality. The home-related factors in this study were parental support, time management at home, parental involvement, learning resources at home, and role models at home. The Pearson correlation was used to analyze the

data, and the correlation coefficients were interpreted in line with Peck and Devore's (2012) guideline. The results of the analysis are presented in Table 9.

Table 9: Pearson Correlation Matrix for Home-related Factors and Students' Academic Achievement

	Variables	1	2	3	4	5	6	7	8	9	10
	Mean	2.88	2.73	2.67	2.81	2.75	50.52	48.21	49.83	50.48	49.76
	Standard Deviation	0.57	0.63	0.69	0.70	0.70	0.33	0.28	0.47	0.56	0.41
1	Time Management At Home	1									
2	Learning Resources At Home	0.67*	1								
3	Parental Involvement	0.74*	0.69*	1							
4	Role Models at Home	0.78*	0.69*	0.76*	1						
5	Parental Support	0.83*	0.70*	0.74*	0.86*	1					
6	English Score	0.66*	0.55*	0.54*	0.62*	0.69*	1				
7	Math Score	0.69*	0.56*	0.57*	0.65*	0.72*	0.81*	1			
8	Int. Science Score	0.67*	0.50*	0.56*	0.69*	0.72*	0.79*	0.79*	1		
9	Social Studies	0.66*	0.50*	0.54*	0.64*	0.67*	0.76*	0.83*	0.77*	1	
10	Overall Aca. Atta.	0.59*	0.40*	0.50*	0.60*	0.61*	0.77*	0.70*	0.78*	0.65*	1

*Correlation is significant at p< 0.05 (2-tailed); Source: Fieldwork Data, 2019

It is observed from the data in Table 9 that there was a moderate and statistically significant positive relationship between time management at home and student academic achievement (r=0.50, p<0.05, 2-tailed). The results further disclosed that learning resources at home had a weak and statistically significant positive relationship with students' academic achievement (r=0.40, p<0.05, 2-tailed). Again, the study indicated that parental involvement had a moderate and statistically significant positive relationship with students' academic achievement (r=0.50, p<0.05, 2-tailed). Furthermore, there was a moderate and statistically significant positive relationship between role models at home and students' academic achievement (r=0.60, p<0.05, 2-tailed), and the relationship between parental support and students' academic achievement was moderate, positive, and statistically significant (r=0.61, p<0.05, 2-tailed). The implication of the finding is that the

students' academic achievement related significantly to the home related factors such as parental support, time management at home, parental involvement, learning resources at home, and role models at home. The researcher was interested in determining the relationship between each of the home-related factors and the subjects involved in the study.

The results discovered that there were moderate and statistically significant relationship between time management at home and students' academic attainment in English Language ($r=0.66$, $p>0.05$, 2-tailed), Mathematics ($r=0.69$, $p>0.05$, 2-tailed), Integrated Science ($r=0.67$, $p>0.05$, 2-tailed), and Social Studies ($r=0.66$, $p>0.05$, 2-tailed) respectively. Similarly, there were moderate and statistically significant positive relationships between learning resources at home and students' academic attainment in English Language ($r=0.55$, $p>0.05$, 2-tailed), Mathematics ($r=0.56$, $p>0.05$, 2-tailed), Integrated Science ($r=0.50$, $p>0.05$, 2-tailed), and Social Studies ($r=0.50$, $p>0.05$, 2-tailed) respectively. The study also disclosed that there were moderate and statistically significant relationships between parental involvement and students' academic attainment in English Language ($r=0.69$, $p>0.05$, 2-tailed), Mathematics ($r=0.72$, $p>0.05$, 2-tailed), Integrated Science ($r=0.72$, $p>0.05$, 2-tailed), and Social Studies ($r=0.67$, $p>0.05$, 2-tailed).

The findings further showed that there were moderate and statistically significant relationships between role models at home and students' academic attainment in English Language ($r=0.62$, $p>0.05$, 2-tailed), Mathematics ($r=0.65$, $p>0.05$, 2-tailed), Integrated Science ($r=0.69$, $p>0.05$, 2-tailed), and Social Studies ($r=0.64$, $p>0.05$, 2-tailed). Finally, the results disclosed that there were moderate and statistically

significant relationships between parental support and students' academic attainment in English Language (r=0.62, p>0.05, 2-tailed), Mathematics (r=0.65, p>0.05, 2-tailed), Integrated Science (r=0.69, p>0.05, 2-tailed), and Social Studies (r=0.64, p>0.05, 2-tailed).

4.4 Discussion of Findings

The results from the analysis of the first research question showed that generally, there was a positive and statistically significant relationship between teacher-related factors and students' academic achievement. This finding substantiates earlier findings from studies that there is a relationship between teacher-related factors and the academic achievement of students as argued by Mphale and Mhlauli (2014) that school improvements largely depend on the availability and caliber of teachers. Specifically, the findings revealed that teacher adequacy, teacher commitment, and teacher support had a weak but statistically significant positive relationship with the academic achievement of students. More so, it was established from the findings that teacher-student relationship and teacher competence had a moderate and statistically significant positive relationship with students' academic achievement. This is why Chapman et al. (2010), MacDonald (2007) and Klaus and Dolton (2008) argue that inadequate teachers in a school is a big problem in improving academic achievement of students.

The finding on the relationship between teacher commitment and student academic achievement falls in line with the observation by Jacob and Lefgren (2006) that a positive correlation exist between effective teaching and academic achievement. Similarly, studies by Adediwura and Tayo (2007), and Akiri and Ugborugbo (2009)

established that teacher commitment and effectiveness significantly predicts students' academic achievement, higher academic quality, and better performing students. Again, the finding that teacher-student relationship correlates with students' academic achievement corroborates with findings from studies that cordial and close interactions between teachers and students result in students' success (Yukl, 2006; Costello, Brunner & Hasty, 2002). Thus, Daft (2005) reiterates that teachers are a strong motivator in the academic achievement of learners. The finding from the study also supports that of Niehaus, Rudasilla and Rakes (2012) that teacher support is a significant determinant of students' academic achievement. These results imply that the teacher-related factors contained in this study were crucial in enhancing the academic achievement of the students. In essence, an improvement in the quality of these factors is probable to boost the academic achievement of the students. However, a reduction in the quality of these factors is likely to lead to a corresponding drop in the academic achievement of the students.

From the analysis of the second research question, it was established that generally, school environment-related factors were good predictors of academic achievement of students in public Junior High Schools in the Effutu Municipality. This finding substantiates that of Karemera (2003) who found out that there is a significant correlation between conducive school environment-related factors and students' academic achievement. Specifically, it was established from this study that instructional materials, schools facilities, class size, conducive school environment, and effective supervision significantly determined students' academic achievement. These are in line with findings from several studies.

For instance, a study by Adane (2013) revealed that availability, adequacy of instructional materials, and non-availability, and inadequacy of instructional materials such as textbooks, and teaching and learning materials, affected students' performance. Lockhead and Verspoor (1991) indicated from their study that lack of or inadequate textbooks in the schools impeded students' proficiency in the use of English Language. David (2014) also established from a study in Sumbawanga District that low number of teachers to students' ratio especially in public schools was a key factor that influenced students' academic achievement. Shah and Inamullah (2012) also found out from their study that schools with over-crowded classes had a direct impact on students' learning and academic achievement because teachers face different problems such as discipline, behavioural problems, poor health and poor performance of students. This made it difficult for both teachers and students to perform to their utmost best. Engin-Demir (2009) established and concluded that attending a school with a better physical environment is associated with increased academic achievement among students, especially in Mathematics.

On supervision in schools, Etsey, Amedahe and Edjah (2004) concluded form a study in Ghana that academic achievement was better in private schools than public schools as a result of effective supervision of work. On conducive school environment, Maganga (2016) purports that establishing and resourcing Guidance and Counselling Units in schools could help in strengthening activities and providing effective guidance and counselling services to help students focus on their academic work for good academic achievement. Also, Singh (2014) maintains that social circles among students are relevant in solving academic challenges, participating in co-curricular

and leisure activities which are likely to result in in their social satisfaction and happiness.

Analysis of the data for the third research question revealed that generally, the student factors identified for the study were good determinants of academic achievement of students in public Junior High Schools in the Effutu Municipality. This finding corroborates that of Mukhwana (2013) which established that there is a positive correlation between student-related factors and academic achievement. Specifically, the study revealed that student effort, student discipline, student engagement, student motivation, and student truancy significantly determined the academic achievement of students. These findings seem to align with findings from earlier studies. Abaasi and Mir (2012) argues that students play crucial roles in their academic achievement and as a result, they must explore all opportunities available within their academic environment. It is also indicated by Engin-Demir (2009) that irrespective of intelligence, students who spend more time on assignments and homework are likely to improve on their grades. On student discipline, Barton, Coley and Wenglinsky (1998) inferring from research findings, conclude that a sufficient degree of classroom discipline helps to create a conducive atmosphere for student learning while students' misbehaviour distracts the process of teaching and learning, and impacts negatively on student achievement in the classroom.

The finding on student engagement corresponds to that of earlier studies that established that there is a significant positive correlation between students' engagement and their academic achievement (Lei, Cui & Zhou, 2018; King, 2015; Wen, Zhang & Dai, 2010; Zhu, 2010). However, the finding on student engagement

does not substantiate what was revealed by Shernoff and Schmidt (2008), and Chen, Yang, Bear and Zhen (2013), whose studies revealed no correlation between student engagement and academic achievement. On student motivation, it has been shown through research findings that there is a positive relationship between intrinsic motivation and academic achievement (Burton et al., 2016). Hence, it is suggested that intrinsic and extrinsic motivation should be combined in order to motivate students to achieve their academic goals (Barrett et al., 2012; Gillet et al., 2009; Hayenga & Corpus 2010). Confirming results from earlier studies, Hassan (2002) observed that students' attitude towards school is significantly related to their academic achievement because such attitudes predict students' basic approach to learning. Hence, student-related factors were significantly critical in the academic achievement of students.

The analysis of the fourth research question showed that home-related factors significantly accounted for students' academic achievement. This is seemingly found to be in support with the findings of Henry and Huizinga (2017) who concluded from their studies that home environment and neighborhood factors greatly influence student attendance and academic achievement. It is for this reason that Quansah (2017) asserts that performing well in school depends on variety of home-related factors including time management, learning resources at home, parental involvement, parental support, and family background influence the academic achievement of students.

Specifically, the study revealed the relationship between time management at home by the students and their academic achievement. This is in support of other findings which portrayed that time management was related to the academic achievement of

students (Subranmanian, 2016; Adebayo, 2015; Nasrula & Khan, 2015; Pehlivan, 2013). Learning resources at home were also found to be a predictor of academic achievement of students, and this justifies the findings of Momoh (2010) and Adeogun (2001) that a significant relationship exist between learning resources at home and academic achievement of students. The finding on parental involvement and students' academic achievement supports the findings from other studies that a positive and a significant relationship exist between parental involvement and students' academic achievement (Adetayo & Kiadese, 2011; Ghazi, Riasat, Saqib & Hukamdad, 2010; Muola, 2010; Conway & Houtenwille, 2008).

It was established from the findings of this study that students' academic achievement was significantly dependent on their family background. This is in agreement with the findings of Mpiluka (2014) who concluded that family backgrounds are significant in determining the academic achievement students. For parental support and academic achievement of students, it was established that there is a significant positive relationship. This portrays the findings of Fetler (2002) and Laeheem (2007) that the support of parents given to students in their education is positively and significantly related to students' academic achievement.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Overview

This chapter discusses the summary of the study and the major findings identified. In the summary section, an overview of the entire thesis is presented by connecting the issues discussed in each chapter. Specifically, the summary includes the purpose of the study, the methodology employed, and the major findings of the study. The chapter also discusses the conclusions drawn from the findings. This is followed by the major findings and conclusions. Finally, the chapter presents the recommendations based on the findings of the study, and suggests areas for further study.

5.1 Summary of the Study

The purpose of the study was to investigate the determinants of academic achievement of students in public Junior High Schools in the Effutu Municipality. To accomplish this purpose, four objectives and research questions were outlined and investigated. Literature was reviewed and aligned to the research questions. The study adopted the descriptive survey design where quantitative data were collected and analysed. The stratified random sampling technique was used to select 585 public Junior High School students for the study. For the teacher sample, the purposive sampling technique was used to select all professional teachers in the thirteen (13) selected schools, bringing their number to 104.

Questionnaire was the main instrument used in collecting data from the participants. The instrument was pre-tested to ensure its validity and reliability before data collection commenced. In the analysis of the data, responses from 560 student

respondents and 100 teacher respondents were used. The reason was that the researcher, after several attempts, could not retrieve twenty-five (25) questionnaires from the students and four (4) questionnaires from the teachers. The data was analyzed using descriptive statistics such as frequencies and percentages for the demographic variables. In analysing the research questions, Pearson Moment Correlation, Multiple Regression, T-test, and One Way ANOVA were used.

5.2 Major Findings of the Study

- The findings from the first research question showed that there was a positive and statistically significant relationship between teacher-related factors and the overall academic achievement of the students. Further analysis of research question one established that all the teacher-related factors (teacher adequacy, teacher commitment, teacher-student relationship, teacher competence, and teacher support) were statistically significant with students' academic achievement in each of the subjects (English, Mathematics, Integrated Science, and Social Studies) used for the study. Therefore, teacher-related factors significantly determined students' academic achievement in public Junior High Schools in the Effutu Municipality.
- The findings from the second research question revealed that school environment factors (instructional materials, school facilities, class size, conducive school environment, and effective supervision) collectively contributed 57.4% of the variance in the students' academic achievement. This was statistically significant. However, conducive school environment did not significantly contribute to students' academic achievement. It was further observed from the findings that in order of magnitude, school facilities, class

size, effective supervision, and instructional materials individually contributed uniquely to students' academic achievement. Thus, in general terms, school environment-related factors were found to be good determinants of students' academic achievement in public Junior High Schools in the Effutu Municipality.

- Findings from the third research question indicated that the student-related factors (student effort, student discipline, student participation, student motivation, and student truancy) collectively, and statistically significantly, accounted for 76.5% of the students' academic achievement. This means that other student-related factors not included in this study accounted for 23.5% influence on the academic achievement of the students. Thus, it could be deduced that student-related factors significantly determined students' academic achievement in public Junior High Schools in the Effutu Municipality. It was also realised from the findings that student motivation, student effort, student engagement, and student truancy significantly determined student academic achievement. On the other hand, student discipline did not make an individual significant contribution to the students' academic achievement.
- Considering the fourth research question, it was established that home-related factors such as parental support, time management at home, parental involvement, learning resources at home, and family background were positively and significantly related to the students' academic achievement. More so, the findings established a moderate and statistically significant relationship between home-related factors students' academic achievement in each of the subjects (English, Mathematics, Integrated Science, and Social

Studies) used for the study. Therefore, home-related factors significantly determined students' academic achievement in public Junior High Schools in the Effutu Municipality.

5.3 Conclusions

It is widely acknowledged and understood that education is essential for leading to overall progress of individuals, communities and nations. Good academic achievement is crucial in attaining good educational qualification and skills and abilities to for an individual to function well in the society. The findings from the study helps in concluding that several factors within and outside the school account for academic achievement of students in public junior high schools in the Effutu Municipality. Thus, it is concluded from the findings that the factors that determine students' academic achievement are multi-faceted, and include teacher-related factors, school environment-related factors, student-related factors, and home related factors.

The study investigated the factors that determine academic achievement of students in public junior high schools in the Effutu Municipality of Ghana. Generally, it was established from the results that there was a positive statistically significant relationship between teacher-related factors (teacher adequacy, teacher commitment, teachers-student relationship, teacher competence, and teacher support) and academic achievement of the students. The conclusion that could be drawn from this finding is that the students' academic achievements are likely to be improved when there is quality in the teacher-related factors. On the other hand, where these teacher-related factors are not of quality, it is likely that the students' academic achievement may not be the best.

It is also concluded that for the academic achievement of students of public junior high schools in the Effutu Municipality to be improved, school environment-related factors such as instructional materials, school facilities, effective supervision, and conducive school environment should be of quality. This is because, these factors were found to be critical in determining academic achievement of the students. Another conclusion from the findings of the study is that student-related factors such as student motivation, student effort, student engagement, student discipline, and student truancy are critical in determining academic achievement of students in public junior high schools in the Effutu Municipality. Hence, headteachers, teachers, and parents must consider and improve on them to enhance academic achievement of the students.

Based on the foregoing, it is concluded that when the right atmosphere and conditions are created, and appropriate and adequate facilities and learning resources are provided, students can perform well irrespective of their socio-economic statuses or family background. It must be emphasized that these factors generally do not operate in isolation. In this light, any attempt to improve the academic achievement of students in public junior high schools in the Effutu Municipality should take a holistic approach.

5.4 Limitations

This study was conducted using students and teachers in public Junior High Schools in the Effutu Municipality in the Central Region. Therefore, the findings may not be generalised to cover students and teachers in private Junior High Schools in the Municipality. Again, the determinants of academic achievement discussed in the

study involved the perceptions of students and teachers in public Junior High Schools in the Effutu Municipality for the 2018/2019 academic year. Therefore, the findings might not be generalized to all times since the conditions during the conduct of this study may be different from other academic years.

5.5 Recommendations

Based on the findings of the study, the following recommendations are made:

- The Directorate of the Ghana Education Service in the Effutu Municipality should, in partnership with headteachers, School Management Committees and Parent Teacher Associations of public Junior High Schools should provide adequate teaching and learning resources, facilities, and conducive school atmosphere and climate for effective teaching and learning.
- Parents should be encouraged to actively be involved in the activities of Parent Teacher Association in the schools where their children are educated. During Parent Teacher Association meetings, parents should be encouraged to be involved in the education of their children, motivate them to be ambitious with their academic work, and devote much effort to their studies. Again, at Parent Teacher Association meetings, parents should be encouraged to monitor their children's output behavior in terms of assignments, project works, class exercises and end of term examinations.
- Headteachers and teachers in public Junior High Schools in the Effutu Municipality should regularly organise seminars and guidance and counselling programmes to educate students on the relevance of education in order to make them become intrinsically motivated to take their studies seriously. Such

programmes should also be geared towards educating the students on time management and study habits to help them improve on their study skills.

- The Directorate of the Ghana Education Service in the Effutu Municipality should organise regular seminars, in-service training programmes, and workshops for teachers in public Junior High Schools in the Municipality to enable them improve on their instructional skills to meet the varied learning needs of students, appropriate selection and use of learning resources including ICT tools, classroom management practices, and pedagogical-content knowledge.

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APPENDIX A

STUDENTS' QUESTIONNAIRE

This questionnaire seeks to collect information on the factors that account for academic achievement of students in public Junior High Schools in the Effutu Municipality. Your candid and objective responses to the items in the questionnaire will go a long way in assisting the researcher to get the needed information. This questionnaire is strictly for an academic exercise, and you are humbly requested to provide accurate and frank information that will assist the researcher in obtaining the correct data for this exercise. Your responses will be treated in strict confidence. You are please requested to **tick (√)** a number that best describes your view. Thank you.

SECTION A: Personal Information

1. Form: JHS 1 [ ] JHS 2 [ ] JHS 3 [ ]
2. Sex: Male [ ] Female [ ]
3. Age: 11-15 [ ] 15- 18 [ ] Above 18 [ ]
4. Who are you staying with? Both parents [ ] Mother only [ ] Father only [ ] Guardian [ ] Other relatives [ ]
5. Parents' Level of Education (Tick one): No Education [ ] JHS [ ] SHS [ ] Tertiary [ ]
6. Father's Occupation: Government [ ] Private [ ]
7. Mother's Occupation: Government [ ] Private [ ]
8. Parents' Marital Status: Married [ ] Single [ ] Widow/Widower [ ] Divorced [ ]

SECTION B

The following is a list of questions concerning your views on the possible factors affecting your low academic performance of students. Carefully read each statement and answer it as accurately as possible. Please Tick (√) a number that best describes your view on each of the items. **On a scale of 5– 1, rate your views on the following statements**. Thank you.

S/N		Please **TICK** a number to rate EVERY option				
		Strongly Agree	**Agree**	**Undecided**	**Disagree**	**Strongly Disagree**
1	The number of teachers in my school are adequate and can assist me pass our exams.	5	4	3	2	1
2	My teachers come to school regularly and they always complete the syllabuses.	5	4	3	2	1
3	My teachers have good relationship with students, are open to questions and suggestions, and they give clarification on issues.	5	4	3	2	1
4	Most of my teachers have adequate knowledge of their subject area.	5	4	3	2	1
5	My teachers always see to it that students submit their homework on time, and do all classroom exercises for marking.	5	4	3	2	1
6	Teaching-learning materials such as textbooks, teachers' guides, wall pictures, maps, atlases and other learning aids are adequate enough to assist me to improve on my academic achievement.	5	4	3	2	1
7	Large number of students accommodated in my classroom makes the teacher not to have enough time for each student and this also brings about students' absenteeism.	5	4	3	2	1
8	School infrastructure and materials such as school building and library, electricity and water are all in good conditions to enhance teaching and learning in my school.	5	4	3	2	1
9	My headteacher always sees to it that teachers are in class and make good use of instructional time.	5	4	3	2	1
10	My school environment encourages me to learn because materials for learning in the school are readily available.	5	4	3	2	1
11	I am ready to learn every subject very well to score good grades.	5	4	3	2	1

S/N		Please **TICK** a number to rate EVERY option				
		Strongly Agree	**Agree**	**Undecided**	**Disagree**	**Strongly Disagree**
12	I read additional materials to gain a better understanding of what I am taught in class.	5	4	3	2	1
13	I actively participate in all class discussions, class exercises and home work.	5	4	3	2	1
14	Student discipline in school is important for good learning and academic achievement.	5	4	3	2	1
15	Most of the time, students who are rude and not disciplined do not perform well in class exercises, class tests and end of term examinations.	5	4	3	2	1
16	At home, I waste too much time talking, watching television or listening to the radio instead of studying.	5	4	3	2	1
17	I have access to a community library and this encourages me to learn at home to improve my academic achievement.	5	4	3	2	1
18	My parents are interested in my education and as such they provide me with the needed school resources to encourage me to learn well.	5	4	3	2	1
19	Senior High School and university students in my community serve as role models to me and I am motivated to study very well.	5	4	3	2	1
20	I consult my parents and other people in my home environment to assist me when I face difficulties with my homework or studies.	5	4	3	2	1

SECTION C

1	21	41	61	81	1	21	41	61	81	1	21	41	61	81	1	21	41	61	81
2	22	42	62	82	2	22	42	62	82	2	22	42	62	82	2	22	42	62	82
3	23	43	63	83	3	23	43	63	83	3	23	43	63	83	3	23	43	63	83
4	24	44	64	84	4	24	44	64	84	4	24	44	64	84	4	24	44	64	84
5	25	45	65	85	5	25	45	65	85	5	25	45	65	85	5	25	45	65	85
6	26	46	66	86	6	26	46	66	86	6	26	46	66	86	6	26	46	66	86
7	27	47	67	87	7	27	47	67	87	7	27	47	67	87	7	27	47	67	87
8	28	48	68	88	8	28	48	68	88	8	28	48	68	88	8	28	48	68	88
9	29	49	69	89	9	29	49	69	89	9	29	49	69	89	9	29	49	69	89
10	30	50	70	90	10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
11	31	51	71	91	11	31	51	71	91	11	31	51	71	91	11	31	51	71	91
12	32	52	72	92	12	32	52	72	92	12	32	52	72	92	12	32	52	72	92
13	33	53	73	93	13	33	53	73	93	13	33	53	73	93	13	33	53	73	93
14	34	54	74	94	14	34	54	74	94	14	34	54	74	94	14	34	54	74	94
15	35	55	75	95	15	35	55	75	95	15	35	55	75	95	15	35	55	75	95
16	36	56	76	96	16	36	56	76	96	16	36	56	76	96	16	36	56	76	96
17	37	57	77	97	17	37	57	77	97	17	37	57	77	97	17	37	57	77	97
18	38	58	78	98	18	38	58	78	98	18	38	58	78	98	18	38	58	78	98
19	39	59	79	99	19	39	59	79	99	19	39	59	79	99	19	39	59	79	99
20	40	60	80	100	20	40	60	80	100	20	40	60	80	100	20	40	60	80	100

CHECK LIST FOR STUDENTS' END OF TERM EXAMINATION RESULTS

This check list is designed to collate examination results of students in public Junior High Schools in the Effutu Municipality for the three terms in 2017/2018 academic year. The researcher circled the examination scores for English Language, Mathematics, Integrated Science, and Social Studies as obtained by each student respondent.

APPENDIX B

TEACHERS' QUESTIONNAIRE

This questionnaire aims to collect information on the factors accounting for low academic achievement among Junior High School students in the Effutu Municipality. Your candid and objective responses on the items in the questionnaire will go a long way in assisting the researcher get the needed information. This questionnaire is strictly for an academic exercise, and you are please requested to provide accurate and frank information that will assist the researcher in obtaining the correct data for this exercise. Your responses will be treated in strict confidence. You are please requested to **tick (√)** a number that best describes your view. Thank you.

SECTION A: Demographic Data

Instruction: Please tick (√) as appropriate.

1. Gender: Male [ ] Female [ ]
2. Marital Status: Single [ ] Married [ ] Divorced [ ] Widow [ ]
3. Age: 20-30 [ ] 31- 40 [ ] 41- 50 [ ] 51 and above [ ]
4. Highest Academic Qualification:
   Post Sec. Cert A. [ ] Diploma [ ] Bachelor's Degree [ ] Masters Degree [ ]
5. Rank: Senior Supt. II [ ] Senior Supt. I [ ] Principal Superintendent [ ]
   Assistant Director II [ ] Assistant Director I [ ] Deputy Director [ ]
   Director [ ]
6. Years of Teaching Experience: 1-5 [ ] 6-10 [ ] 11-15 [ ] 16-20 [ ]

SECTION B

The following is a list of questions concerning your views on the possible factors affecting low academic performance of students. Carefully read each statement and answer it as accurately as possible. Please Tick (√) a number that best describes your view on each of the items. **On a scale of 5– 1, rate your views on the following statements**. Thank you.

S/N		Please **TICK** a number to rate EVERY option				
		Strongly Agree	**Agree**	**Undecided**	**Disagree**	**Strongly Disagree**
1	I have the requisite qualification, knowledge and skills that enable me teach my subject very well.	5	4	3	2	1
2	I am a qualified teacher with the requisite knowledge, skill and experience to enhance effective teaching and learning in my school.	5	4	3	2	1
3	I ensure that students submit their homework on time and they actively participate in all class activities, including exercises.	5	4	3	2	1
4	I relate very well with my students and it gives them the opportunity to ask questions and clarify issues they do not understand.	5	4	3	2	1
5	I am regular and punctual at school and I make sure I complete my syllabus.	5	4	3	2	1
6	Teaching-learning materials such as textbooks, teachers‟ guides, wall pictures, maps, atlases and other learning aids are adequate enough to assist students to improve on their academic achievement.	5	4	3	2	1
7	School infrastructure and materials such as school building and library, electricity and water are all in good conditions to enhance teaching and learning	5	4	3	2	1
8	Large class size often causes teachers to ignore the individual needs of students	5	4	3	2	1
9	In my school, there is effective instructional supervision on the part of circuit supervisor and the headteacher.	5	4	3	2	1
10	The school environment encourages teachers to teach well and for students to learn.	5	4	3	2	1
11	Most students in my school are always ready to learn every subject, and are eager to get good grades in class tests and end of term examinations.	5	4	3	2	1

S/N		Please **TICK** a number to rate EVERY option				
		Strongly Agree	**Agree**	**Undecided**	**Disagree**	**Strongly Disagree**
12	Most students in my school read additional materials for additional information on what is taught at school.	5	4	3	2	1
13	Student discipline in schools is essential for good learning and it enhances academic achievement	5	4	3	2	1
14	Indiscipline and unruly students in my school do not perform well in in class exercises, class tests and end of term examinations.	5	4	3	2	1
15	Lack of professional support (psychologists, counsellors etc.) in my school negatively affect student behavior and their academic achievement	5	4	3	2	1
16	Numerous home chores and excessive time wasting activities such as conversing, playing, watching television on the part of students prevent them from effective studies.	5	4	3	2	1
17	Students' access to a community library encourages them to learn at home and this helps to improve their academic achievement.	5	4	3	2	1
18	Poor students' socio-economic background mostly results in their poor academic achievement and this makes some of them neglect school work.	5	4	3	2	1
19	Provision of the needed school resources to students by parents help in good academic achievement of the students.	5	4	3	2	1
20	As a teacher in the community, I serve as a role model to the JHS students and this motivate them to study very well.	5	4	3	2	1

APPENDIX C

UNIVERSITY OF EDUCATION, WINNEBA
FACULTY OF EDUCATIONAL STUDIES
DEPARTMENT OF BASIC EDUCATION
P. O. Box 25 Winneba, Ghana
+233 (0)[illegible]

Date: January 14, 2019

The Director
Municipal Education Directorate
Effutu Municipal Assembly
Winneba

Dear Sir/Madam,

LETTER OF INTRODUCTION:

We forward to you, a letter from Ms. Gifty Koomson a second year M.Phil. student of the Department of Basic Education, University of Education, Winneba, with registration number 8170030007.

Ms. Gifty Koomson is to carry out a research on the Topic *"Determinants of Academic Achievements of Students in Public Junior High Schools in the Effutu Municipality"*.

I would therefore be most grateful if you could offer her the needed assistance.

We count on your usual co-operation.

Thank you.

Yours faithfully,

DEPT. OF BASIC EDUCATION
UNIVERSITY OF EDUCATION
WINNEBA, GHANA

SAKINA ACQUAH (MRS.)
(Ag. Head of Department)

APPENDIX D

GHANA EDUCATION SERVICE

In case of reply the number and Date of the letter should be quoted

REPUBLIC OF GHANA

MUNICIPAL EDUCATION OFFICE
POST OFFICE BOX 54
WINNEBA
TEL: 03326 22075
EMAIL: geseffutu@gmail.com

My Ref. NO:GES/CR/EM/EOW/LC.99/VOL.3/60
Your Ref. No .....

DATE: 25TH FEBRUARY, 2019

LETTER OF INTRODUCTION

We acknowledge receipt of your letter dated 14th January, 2019 seeking permission for a student to conduct a research in Effutu Municipality.

Permission has been granted to Ms. Gifty Koomson, a second year M. Phil student of the Department of Basic Education, University of Education, Winneba to conduct a research in the Municipality from 26th February, 2019 to 11th April, 2019.

She is working on the topic "Determinants of Academic Achievements of Students in Public Junior High Schools in the Effutu Municipality".

Teachers are to assist her in gathering her data while ensuring that she abides by the ethics of the teaching profession.

ROSE TENKORANG
MUNICIPAL DIRECTOR OF EDUCATION
EFFUTU-WINNEBA

AG. HEAD OF DEPARTMENT
DEPARTMENT OF BASIC EDUCATION
UNIVERSITY OF EDUCATION
WINNEBA

HEADTEACHERS OF PUBLIC JUNIOR HIGH SCHOOLS

cc: Ms. Gifty Koomson ✓
Dept. of Basic Education, U.E.W

All Circuit Supervisors
Effutu Municipality