

UNIVERSITY FOR DEVELOPMENT STUDIES

**EFFECT OF SCHOOL ASSOCIATED FACTORS ON THE PERFORMANCE OF
JUNIOR HIGH SCHOOL PUPILS IN THE TAMALE METROPOLIS**

HAMDAN BALA

2025



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JUNIOR HIGH SCHOOL PUPILS IN THE TAMALE METROPOLIS**

BY

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MPHIL EDUCATIONAL MANAGEMENT AND PLANNING

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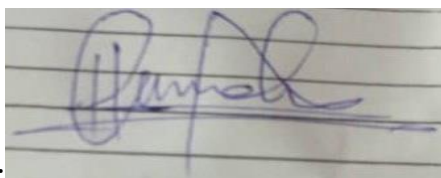


DECLARATION

Student

I hereby declare that this thesis is the result of my original work and that no part of it has been presented for another degree in this University or elsewhere:

Candidate.



Signature:

Date: 18-02-2025

Hamdan Bala

SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of the thesis was supervised following the guidelines on supervision of the thesis laid down by the University for Development Studies.

Supervisor



Signature:

Date: 18-02-2025

Dr. Alhassan Wuripe

DEDICATION

I dedicate this work to my parents and family.



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I wish to express our gratitude to all persons who have contributed in varied ways to the success of this work. My initial gratitude goes to God for granting me the sense of good health and commitment to go through the entire studies.

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LIST OF ABBREVIATIONS

Abbreviation	Full Meaning
GFEP	Ghana's Free Educational Policy
ICT	Information Communication and Technology
	United Nations Educational, Scientific and Cultural
UNESCO	Organization
JHS	Junior High School
SDG	Sustainable Development Goals
GDP	Gross Domestic Product
WHO	World Health Organization
BECE	Basic education certificate examination
FCUBE	Free Compulsory Universal Basic Education
GETFund	Ghana Education Trust Fund
NGO	Non-Government Organization
GES	Ghana Education Service
USAID	United States Agency for International Development
DFID	Department for International Development
JICA	Japan International Cooperation Agency
DANIDA	Danish International Development Agency
ADB	Asian Development Bank



ABSTRACT

This study investigated the effect of school-associated factors on the performance of junior high school pupils in the Tamale Metropolis. The study used an exploratory sequential mixed methods design along with pragmatism as the research philosophy. This study employed a multi-stage sampling process and 12 schools were selected using random sampling. The study sampled 12 headteachers, 859 final year pupils, and 36 final year teachers using simple random sampling and purposive sampling to make a total of 907 participants. The quantitative data were analysed using descriptive and inferential statistics. The qualitative data from the focus group discussions were analysed using thematic analysis. The study found that the overall pupils' performance and teachers' absenteeism rates were both low and the class sizes were larger across the schools sampled. Additionally, in this study the results of linear regression analysis indicated that teachers' absenteeism rates explain 62% of the variations in students' mean scores ($F(1,10) = 16.669$, $R^2 = .625$, $p < .002$), implying that the teachers' absenteeism rate is a significant negative predictor of pupils' examination scores ($\beta = -.791$, $t = -4.083$, $p < .002$). Also, other results of linear regression in this study showed that class size explain 55% of the variations in students' mean scores ($F(1,10) = 12.631$, $R^2 = .558$, $p < .005$), signifying that the class size has a significantly negative effect on pupils' examination scores ($\beta = -.747$, $t = -3.554$, $p < .005$). This study concludes that teachers' absenteeism and class size have significantly negative effect on pupils' examination scores. The study recommended that schools should implement strategies to reduce teachers' absenteeism and large class sizes so as to improve academic performances of pupils.

Key words: School Associated Factors, Junior High School, Performance, Pupil , Tamale Metropolitan



CHAPTER ONE

INTRODUCTION

1.0 Background to the study

Education serves as a cornerstone for civilization and societal progress. Education as an agent for development targets personal growth, economic development, better employment prospects and social progress (Moqimi, 2023; Yuldashevna, 2024). In developing the economy, it contributes to fostering human capital formation, driving innovation, and enhancing a country's competitiveness in the global economy (Yuldashevna, 2024). Furthermore, education plays a crucial role in addressing social harm by promoting personal growth and social cohesion (Moqimi, 2023). It can also provide additional psychosocial benefits and advance the role of higher education in achieving sustainable development goals (Apanovich et al., 2023). At the individual level, education produces personalities who are prepared to advocate for positive, long-lasting change in industry and the society (Susanti et al., 2024). Moreover, academic excellence is associated with enhanced mental health, better labor market outcomes, and improved job satisfaction (Bakhtadze & Shengelia, 2015; Bracke et al., 2014). Pupils with strong academic performance are better equipped to contribute to sustainable industrial progress and offer substantial advantages to both learners and society (Susanti et al., 2024). All these implied that success in education has far-reaching impacts beyond individual achievement.

These suggest that success in education has far-reaching implications beyond individual achievement. In practice, only quality education is closely linked to economic development, as it produces a skilled workforce essential for innovation and growth (Vasilevska & Tomovska-Misoska, 2024). Quality education encompasses safe learning environments, appropriate curricula, and skilled teachers in addition to traditional academic measures (Manojlovic, 2017). Generally,





quality education is fundamental to societal progress and economic well-being. Therefore, investing in quality education remains crucial for promoting sustained economic progress and improving societal well-being (Vasilevska & Tomovska-Misoska, 2024). Also, it is interesting to note that studies indicates that high academic achievement is a sign of high-quality instruction (Sajari et al. 2021; Susanti et al., 2024; Tomovska-Misoska & Vasilevska, 2024). SDG4 aims to achieve this goal by highlighting the importance of high-quality education and successful learning outcomes in creating citizens with employable skills, respectable jobs, and entrepreneurship for sustainable development (Sajari et al. 2021). Many nationwide programs that seek to break the cycle of poverty and deliver high-quality education reflect this objective (Sajari et al. 2021).

African has long placed great emphasis on access and equity in education, however currently, academic achievement in addition to quality are regarded crucial. This have pushed several African countries to put forth multiples of interventions to enhance academic quality and students' achievement. These include curriculum reforms; capacity building; professional regulation; partnerships and collaboration; transformative teaching techniques; and infrastructure development (Bvumbwe & Mtshali, 2018). Global cooperation between nations has similarly shown a opportunities in distance education, particularly in preparing teachers (Adekanmbi & Boitshwarelo, 2010).

in Africa, one promising intervention to raise educational standards is the use of open educational resources. It has the potential to improve quality, reduce costs, and increase access to opportunities in education, but it is yet to be practicalized (Wright & Reju, 2012). Moreover, integrating artificial intelligence into educational curriculum is also shown as a viable strategy to enhance students' achievements and solve educational problems all over Africa (Chisom et al. 2024). Ghana is not exempted; the government have implemented several interventions to increase academic quality



and success at all educational levels. Ghana's government has put in place measures and reforms including a revised curriculum, capitation grants, free meal programs and most importantly, free basic education to enhance education.

Moreover, Ghanaian government have over tripled its spending in basic education within the last decade (Berry, Karlan, & Pradhan, 2018). With the provision of textbooks, tuition, and other teaching and learning materials at free cost to students. This has meaningfully supported the target of universal access to basic education. Furthermore, making internet accessible in some schools has enhanced quality and students learning outcomes both in the urban and rural settings (Donkoh et al. 2023). Ghanaian libraries now offer impartial information, inclusive and equitable library services, and access to information and are crucial to reaching the SDG4. These resources enable instruction, promote collaboration among stakeholders, and protect longstanding information flows (Owusu-Ansah, 2021). The government of Ghana and donor groups have exceptionally improved quality education through the provision of teaching and learning materials, constructing educational facilities, advocating for gender equality, founding scholarship schemes, and establishing favorable learning environments (Boateng et al. 2024). Notwithstanding these efforts, crucial barriers to academic achievements still persist in basic schools all over developing nations, specifically in Africa. This is due to the fact that stakeholders for some time now have expressed concerns about academic achievements falling behind and believe that access, rather than quality, has received excessively attention (Ansong et al., 2015). Studies shows that students in government schools, generally, show poor educational success rates compared to other students in private schools, in spite of the greater salary costs for teachers in the public sector (Aturupane, Glewwe, & Wisniewski, 2013). Research have shown that in Ghana, for example, the overall academic success is below average, with predominantly low achievements in disadvantaged areas (Ansong



et al., 2015). This situation is worrying, as it retards the academic growth of pupils from underprivileged communities and impedes development.

These low achievements could be due to a multiple of factor and current studies have tried to find a link between precise factors and pupils' academic achievements (Fox and Barrera, 2020; Fox et al. Lake et al., 2019. 2020). Lake et al. (2020) believed that different socio-personal factors are associated with academic achievement, which is driven by the desire to learn and have high grades. Several elements, such as the school setting, satisfaction with the educational system by pupils, as well as personal features like self-discipline, all these have an influence on high academic success (Daily et al., 2016; Susanti et al., 2020; Wu et al., 2024). Base on a study done in Ghana, among all the managerial variables, the teacher's effort had the greatest impact on pupils' academic success (Donkoh et al. 2023). Furthermore, there is a significant correlation between math and English scores and student attributes like age, gender, academic self-efficacy, and dedication to school (Chowa et al. (2015). Interestingly, household factors also play a role, with the adoption of cooking gas in rural areas marginally improving children's learning outcomes by reducing time spent on domestic chores (Frempong et al., 2021). Based on these evidences, three main factors influence pupils' academic performances which includes the school, family and student factors (Ker, 2016; Tomul, Önder, & Taslidere, 2021). In reality, schools with enough resources (as in developed nations) will concentrate on students' factors for enhance performance, whereas, resource constrained schools (as in developing countries) need to improve their resources (Glewwe, 2021). According to Othoo (2019), school-based factors play a significant role in academic performance of learner. To put simple, school-based factors encompass all elements of the school related to teaching and learning which can influence academic performance of students. Therefore, the school environment is crucial for students' learning process and achievements. This



is particularly important in developing countries since pupils gain major part of their knowledge in schools (Glewwe, 2021; Woessmann, 2016).

The effect of school level factors on pupil academic performance is multifaceted, with various studies highlighting the different elements that contribute to educational outcomes. Evidence showed that physical structures of the school system (According to Woessmann (2016), learning activities and prior educational achievements (De Koning et al., 2012), school-based health centres (Geierstanger et al., 2004), teacher motivation and incentives (Abubakar, 2024; Palupi et al., 2024), quality of school-based resources (Awolaju, 2016), the time spent in the classroom, pupil-teacher ratio, teaching at the right level, and students' assessments that provide problem-solving response (Glewwe, 2021; Woessmann, 2016) have significant impact on students' academic performance. Similarly, Lewinski (2015) said that classroom architecture affects academic performance and lack of structures has diverse impacts on learning. Also, Banerjee (2016) suggested that the under performance by pupils in schools is due to lack of positive school environment and support for effective teaching and learning. The availability of the right teaching and learning resources can lead to the development of nurturing concepts for use in the classroom (Frampong, 2021). Moreover, the solid connections between school socioeconomic status composition; outside school activities; schools' academic pressure; and instructional practices was previously reported (Holzberger et al., 2020). School counselling services, social support, and learning motivation have been identified as significant positive predictors of academic achievement (Mokodenseho et al., 2024).

Therefore, fostering an environment that promotes academic excellence can lead to better-prepared individuals who can contribute positively to society and drive sustainable development. Improving basic-level management practices in micro and small enterprises can also contribute to better



performance in industrial clusters (Mano et al., 2011). Furthermore, enhancing academic self-efficacy may boost educational aspirations and academic performance, particularly in resource-limited countries where financial burdens can be demotivating (Ansong et al., 2018). These are particularly difficult because government initiatives and reforms face challenges due to the lack of sustainable implementation strategies and the influence of political relationships on educational policymaking (Donkoh et al., 2021). Adding to this, there are contradictions in research findings across different studies regarding which factors significantly affect pupils' academic achievements. While some research indicates that government interventions have a positive impact on students' academic performance (Abdul-Rahaman et al., 2018), others suggest different factors as predictors of pupil's academic performance than economic resources (Ansong, 2014). Since these factors do not operate in isolation it requires that a separate and detail study on each factor is necessary to fully understand the contribution of each factor on pupils' academic success (Cui & Hu, 2023; Fang et al., 2023; Ishii et al., 2016; Li & Yu, 2023; Mokodenseho et al., 2024; Shao et al., 2024; Yu et al., 2022). This will support continued evaluation and refinement of educational policies to effectively improve academic performance and quality across Ghana's education system.

1.2 Problem statements

The significance of education is great, since it builds up a person's ability and sense of patriotism to contribute positively to the growth of a nation, be it financial, economic, social and political aspects. Education can accomplish its objective if academic performances of pupils are improved, particularly at the basic education certificate examination (BECE) level. Academic performance in this study means the outcome for a school child after completing Junior high school (JHS) which is measured through basic education certificate examination (BECE). Academic performance is an



important parameter in measuring pupils' success. A pupil's performance in any examination is dependent on many variables including their motivation levels, fear, stress, anxiety, confident in a course, absenteeism in school, parental level of education, parent occupation and income level, and early understanding of some basic skills before school (Chowa et al., 2015; Ker, 2016; Nartgün & Çakır, 2014; Tomul, Önder, & Taslidere, 2021). However, school level factors have been reported to affect the academic performance of pupils in schools.

For that matter, a range of initiatives have been undertaken by the past and present governments of Ghana to improve on infrastructure and other educational inputs in the educational sector. Some of the initiatives included free compulsory universal basic education, school feeding, capitation grant, GETFund, provision of free books and uniforms to students, provision of laptops to teachers, renovation of old school infrastructure and building of new ones just to mention a few, to curb the problem. Additionally, Non-government Organizations (NGO's) such as World Vision International, Action Aid Ghana, Donors (DFID, USAID, JICA, DANIDA and ADB) and others such as civil society, and educators' have been contributing in the form of money, human resource, infrastructural facilities and material resource, which have helped to support specific shortfalls in the Ghana Educational Service (GES). basic education certificate examination (BECE)

Despite these interventions, pupils' academic performances have not been positive in public schools in the Tamale Metropolis. The results of the study by Nugba et al. (2021) revealed that the proportion of pupils who passed the BECE in rural schools were less than those who passed in the urban schools in Ghana and this include schools in the Tamale Metropolis. Similarly, a report stated that pupils' performance in the BECE in the Northern Region is persistently low, and in 2015, 19.56% passed and in 2018, 37.24% passed within aggregate 6-30 (Modern Ghana News,



2020). In addition to this, the study by Iddi, (2016) illustrated that the BECE performance of pupils in public schools were poor compared to private schools in the Tamale Metropolis.

Perhaps, most of the initiatives undertaken, have not given priority to school background factors that may improve pupils' achievements. According to Acquah and IKwenin (2021) schools in Ghana are still suffering from insufficient resources such as school buildings, laboratory equipment, furniture, text books and exercise books which lead to poor performance.

According to the study by Mpiani (2012), school environment factors such as frequent interference of outsiders in the school premises, insufficient and poor utilization of teaching and learning resources affect the pupil's academic achievements in schools in the Ashanti Region. The report by National Inspectorate Board showed that most schools (55.2%) were having unsatisfactory infrastructure and 42.5% lack sufficient classrooms and 87.6% lack sufficient furniture leading to multigrade teaching and learners sitting on classroom floor, respectively (Ministry of Education, 2021). In the same report, the quality of teaching in 66.8% of the schools examined were rated not satisfactory and this was serious in the case of the Northern Region including Tamale Metropolis.

Wahab (2012) showed that teachers have low motivation in delivery quality teaching due to lack of incentives, core textbooks, furniture, libraries and classrooms in public basic schools in Tamale Metropolis. Kere (2015) stated that the quality of teaching in the Tamale Metropolis is hampered by deficiency in trained teachers, lack of appropriate teaching and learning materials, limited time for lessons, insufficient usage of practical and industrial-visit approach to lessons delivery.

Hence, literature is pointing at two problems in the Tamale Metropolis: poor BECE performance of pupils and unsatisfactory school-based resources. However, there is inadequate research in the case of the JHS in the Tamale Metropolis on whether school-associated factors have significant

effect on students' academic performance. This research would therefore investigate the influence of school-associated factors on the BECE performance of pupils in the Tamale Metropolis.

1.3 Purpose of the study

The main purpose of the study is to investigate the effect of school-associated factors on the performance of junior high school pupils in the Tamale Metropolis.

1.3.1 Specific objectives

The current research:

1. assess the relationship between teachers' absenteeism and pupil's academic performance in basic schools in Tamale Metropolis.
2. assess how class size impacts on pupils' academic performance in basic schools in Tamale Metropolis.
3. determine the cause of poor academic performance of pupils in basic schools in Tamale Metropolis.
4. identify the strategies adopted to improve academic performance of pupils in basic schools in Tamale Metropolis.

1.3.2 Research questions

This study formulated the following research questions:

1. What is the relationship between teachers' absenteeism and pupils' academic performance in basic schools in Tamale Metropolis?



2. How does class size impacts on pupils' academic performance in basic schools in Tamale Metropolis?
3. What is the cause of poor academic performance of pupils in basic schools in Tamale Metropolis?
4. What are the strategies adopted to improve academic performance of pupils in basic schools in Tamale Metropolis?

1.4 Significance of the study

This study has several importance mentioning.

The first obvious significance of this study is that it will contribute to knowledge, policy, and practices concerning school-associated factors and students' performance. This study findings will inform policy makers on the influence of school-associated factors on pupils' performance in BECE.

The results of this research would also reveal the influence human resources at the school has on pupils' academic performance. This information will help government and GES to take the necessary actions to enhanced pupils' academic performances.

In addition, it will also identify the extent to which the financial resources status of school affect pupils' academic performance among junior high schools. As such policy makers can make new policies and strategies to ensure that financial resources require by basic schools are provided to increase pupils' academic achievements.

Its findings would also provide knowledge about the effects of physical resources available in basic schools on pupils' academic performance.

The results would further give an over view on how teaching-learning activities affect pupils' academic performance. This kind of knowledge shall inform government and policy makers to review, formulate and strengthen existing policies and strategies in order to implement new learning techniques or strengthen existing ones to increase pupils' academic performance.

Finally, in the educational system, the outcome of the study shall provide many benefits to stakeholders and opinion leaders such as Ghana Education Service (GES), head-teachers, teachers, school management committee and parent teacher association. Fundamentally, it would help these leaders to understand the need of providing and/or strengthening infrastructure and teaching-learning materials in school, maintaining and provision of funds to run operational costs in school. The research would draw the attention of regulatory bodies and administrators to initiate practices and strategies in schools that can alleviate the challenges at school level to enhance students' performance.

1.5 Delimitations of the study

The current study was delimited to only junior high schools in Tamale Metropolis. This study concentrated on investigating only the effect of school-associated factors on the performance of junior high school pupils in the Tamale Metropolis. The investigation was also restricted to only the headteachers, final year teachers and students in the public and private junior high schools found in the Tamale Metropolis. This is because this group of participants are well familiar with information regarding BECE as compared to other teachers and students in basic schools. On the whole, the study followed standard methods of research design, data collection, analysis and presentation.



1.6 Limitation of the study

This study resulted in a number of limitations. Furthermore, only one semester was allocated for survey administration, data collection, data analysis and final written reports. Hence, successfully completing this kind of work within that limited time could lead to hasty conclusions and shallow presentation of facts. While mixed methods research offers a robust framework for research, it also presents challenges such as complexity in integrating different data types and analysis methods as well as interpretations. A further disadvantage of this study is the researcher's role as primary data collector may have resulted in the researcher's bias development during the study.

1.7 Definition of Terms

The study makes use of following terms, as such they are supposed to be clarified.

Basic school: Basic school is a stage in education in which the bases of formal education or training begin; it includes the primary and the junior high school.

Pupil: Pupil is a term normally used to refer to a basic school child.

School resources: this means personals, funds, materials and equipment, and infrastructure a school has accumulated over time.

School-associated factors: These encompass all elements of the school related to teaching and learning which can influence academic performance of students.

Class size: this means the number of pupils admitted to a particular class within a period of time.

Absenteeism rate: This is the number of absent days divided by the total number of working days for a given period expressed in percent.

Teaching and learning materials: These means all supplies, consumables, books, tools and equipment, electronic devices, and activities of teaching, learning and assessment.

Pupils' academic performance: It is the outcome for school children after sitting for an examination or any other assessments organized by their school or an external assessments body (basic education certificate examination) to measure pupils progress in learning.

1.8 Organization of the study

The current study was separated into five chapters. The Chapter One outlines the purpose of the study, provides a problem statement, outlines the study objectives, evaluates the research questions, evaluates the importance of the study and defines the study boundaries. The Chapter Two reviews relevant literature related to the topic and the research objectives. The Chapter Three outlines the methods used in conducting the study and analysing the data. The Chapter Four presents the data and analysis, and discussion of the findings with citations to relevant literature. The Chapter Five gives a summary of the study's findings, conclusions and recommendations.



CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews relevant literature from previous studies, books, periodicals and reports conducted in the light of the research objectives focusing on the following topics: Theoretical framework; Conceptual framework; Academic performance of students; Teaching-learning materials for students; The need for quality education; Equity in Education; The effect of teaching-learning materials and infrastructure on student learning.

2.1 Theoretical Framework

The theory that was adopted for this study is Education Production Function Theory. Education Production Function Theory explain the mathematical processes involved in transformation of inputs by an educational system (Stephen & Eileen, 1990). An Education Production Function is an application of the financial concept of a production function to the field of education (Hanushek, 2020).

Several elements that affect the pupils learning outcomes are defined by the Education Production Function theory. These factors involved teacher-student ratio, instructional periods and resources, and infrastructure, all these have an influence on quality education and academic success (Hanushek, 2020). By comparing educational inputs and outputs to economic production processes, this theoretical framework suggests a relationship (Monk, 1989). Studies have long used multiple methods to evaluate structural parameters in the function so as to examine educational productivity and inform policy decision making (Monk, 1989). For instance, the study from Seoul, Korea, demonstrated that the same-sex education has a crucial influence and that the coefficients





diverse across the districts (Choi et al. 2014). The interpretation and application of the Education Production Function theory are still controversial in spite of its widespread use in educational studies. In education, the idea of using pupils as economic elements bring about difficult matters concerning effectiveness and productivity, indicating the prospect of enlarging the model to contain faculty as an economic element (Johnson, 1978). In addition, investigations on online studies have revealed that students getting access to study materials and the time invested in learning could enhance grades, nonetheless the influence of recorded teachings was not completely clear (Byrd and Minadeo, 2017).

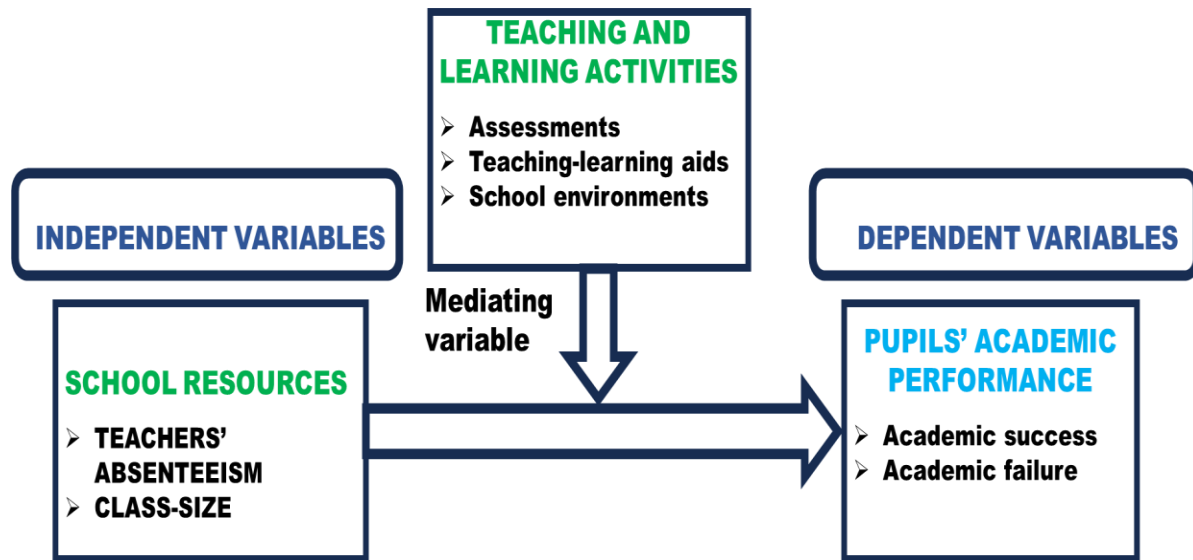
As a whole, the Education Production Function Theory is a supportive tool in understanding how educational inputs as well as outputs are linked to each other. Studies have used them to explore how various instructional methods influence student achievements in different contexts, from online tertiary education to secondary education (Byrd and Minadeo, 2017; Choi et al. 2014). This theory is applicable to this study because school-based factors influence students' academic success in a number of ways. This theory has been used in countless studies to estimate the effectiveness (performance) of educational systems by elucidating how students' achievements vary depending on their schools, friends, and family status (Witte & López-Torres, 2017). Alexander (2024) used sociological, economic and legally perspective to explain that in an educational system if there is enough educational inputs and adequate school process, then students' performance will be successful. However, the theory's application is complex and requires careful consideration of the underlying assumptions and the specific educational context (Johnson, 1978; Monk, 1989).

2.2 Conceptual Framework

Conceptual framework utilized in this study showing the relationship between independent variables and dependent variables is illustrated in Figure 2.1. This study investigated the effect of school-associated factors on pupils' academic performance. These school factors encompass all elements of the school related to teaching and learning which can influence academic performance of students. In this study, the school-associated factors as the main independent variable considered teacher absenteeism and class-size. In this regard, the dependent variable is the "pupils' academic performance".

In this framework, the teacher absenteeism is a major influencing factor that affects the amount of time a child receives teaching and quality of teaching in a school and influence pupils' academic performance. Also, the quality of teaching, learning activities and materials are also affected by the class-size in schools which goes to influence pupils' academic performance. Consequently, the amount and quality of teaching-learning activities in school representing the mediating variable directly influence pupils' academic performance. Holzberger et al. (2020) mentioned that the association between students' performances and school-associated variables may well be changed viably and developed. A research results showed that the relationship between the school-associated variables and students' achievement may change depending on the particular school factors (Supports et al., 2016; Quin, 2017).





Source: Author's construct, 2024.

Figure 2.1: Conceptual framework showing the relationship between independent variables and dependable variables.

The conceptual framework for understanding the effect of school-associated factors on pupils' academic performance can be drawn from the synthesis of findings across multiple studies. School-related factors encompass a range of elements including the school environment, teacher performance, and the use of technology in education. Firstly, the school environment is recognized as a significant factor influencing academic achievement. According to Güngör and Erçetin (2022), teachers perceive school-related factors as having a substantial impact on students' academic success, more so than administrators and students themselves.

This implies that academic results are significantly influenced by the quality of the school environment as judged by teachers. Additionally, according to Odufuwa (2024), school-related factors influence secondary school students' academic performance in economics even though they have a smaller effect than student attitudes and home environments. Furthermore, another



important school-based factor is the effectiveness of the teachers. Werang and associates. (2022) highlights that academic achievement in Indonesian language courses is significantly positively impacted by both teacher instructional performance and student learning motivation. This emphasizes how crucial good teaching strategies and the inspiring environment that teachers foster are in determining students' success. Furthermore, it is pertinent to integrate technology into educational environments. Simões and associates. (2022) suggests that academic achievement is positively impacted by computer use as part of a larger computer-based learning environment, although this relationship can be moderated by variables like maternal education and family size.

To put it briefly, teacher absenteeism, class-size, and students' performance are all included in the conceptual framework for the influence of school-related factors on pupils' academic performance. To impact academic achievements, these factors work in a coordinated way and with external factors such as the home environment and the student characteristics. Studies have emphasis the essence of school-linked factors and how they interact in wider educational settings in order to enhance academic achievements (Güngör & Erçetin, 2022; Simões et al., 2022; Werang & associates, 2022).

2.3 The academic performance of students

Numerous factors play a role in the academic success of students in educational institutions. Explicitly, three principal aspects of school have been recognised to impact students' achievement namely school-associated factors, family background factors, and student-personal factors (Tomul, Önder, & Taslidere, 2021). The study by Tomul, Önder, and Taslidere (2021) confirmed that characteristics related to the students themselves explain disparities in academic achievements. In a similar study, Ker (2016) found that the factors that affected students' academic performance the most were related to them. According to research, pupils' performances in school is related to their



positive attitudes towards the program of study such as motivation levels, fear, stress, anxiety and belonging (Chowa et al., 2015; Nartgün & Çakır, 2014). Additionally, Tomul, Önder, and Taslidere (2021) reported that pupil confidence in a course, absenteeism in school, parental level of education, parent occupation and income level and early understanding of some basic skills before school contributed to students' performance in school. Research shows that the parents of the students with poor academic performances are most likely to have poor educational background, unemployed or work in low prestigious jobs with low incomes, speak a different language at home other than the learning language and may reside in rural locations (OECD, 2019). The association of socio-economic status of pupil's parents and pupils' academic success have been reported (Harju-Luukkainen et al., 2020). However, Palupi et al. (2024) suggests that parenting styles do not directly impact learning outcomes but do affect character formation, which in turn influences academic success. In Ghanaian schools, management and leadership including quality education management functions, particularly teachers' efforts, have a substantial impact on pupils' academic performance (Donkoh et al., 2023). Another variable, school leadership, including instructional and supervisory functions, shows a significant positive correlation with academic performance in public senior high schools (Afram et al., 2024). Moreover, socio-economic factors: Rural-urban gaps account for 31% of performance trajectories, with extreme variations within rural areas (Ansong et al., 2015). Additionally, parents and role models play a crucial role in pupils' academic performance (Okyerefo et al., 2011). Psychological factors: Academic self-efficacy indirectly improves academic performance through the mediational role of educational aspirations, with stronger effects for boys than girls (Ansong et al., 2018). Motivational factors (expectation and volition) and engagement factors (academic interest and learning attitude) affect academic performance differently at secondary and tertiary levels (Ahinful & Taurigana, 2018).



Infrastructure and resources: Infrastructure inequality significantly impacts district-level academic performance, suggesting the need for policies to bridge the education infrastructure gap (Agyei et al., 2024). Extracurricular activities: Competitive sports stressors have a statistically significant influence on the academic performance of student-athletes, particularly females, in colleges of education (Agorthey, 2023). To promote academic performance in Ghana, a multifaceted approach is necessary. This includes improving school leadership and management (Afram et al., 2024), addressing infrastructure inequalities (Agyei et al., 2024), implementing targeted interventions to boost academic self-efficacy and educational aspirations (Ansong et al., 2018), and considering the unique needs of student-athletes (Agorthey, 2023). Additionally, introducing school social work interventions could help strengthen the bond between home and school, addressing psycho-social problems that may affect academic performance (Ampomah, 2021).

The school environments play a crucial role in students' learning process. Since pupils gain major part of their knowledge in schools, the school-associated factors are crucial to consider. According to Othoo (2019), school-based resources play a significant role in academic performance of learner performance in exams. Lewinski (2015) looked at how classroom architecture affects academic performance and found that a lack of structure has diverse impacts on learning. In 2016, Awolaju (2016) found that the quality of school-based resources in schools had a significant impact on students' academic performance. The availability of the right teaching and learning resources can lead to the development of nurturing concepts for use in the classroom (Frampong, 2021). Regmi and Jones, (2020) pronounce teaching-learning materials as enablers for teacher and students' demonstration in the classroom situation used to enhance teaching strategy and pupils learning. Frimpong, (2021) highlighted the importance of instructional materials availability in achieving effectiveness in school system teaching and learning process and supervision (Yeboah, Abonyi, &

Luguterah, 2019). Additionally, Abdu Raheen (2014) explained that teaching resources simply explanations and comprehensively subject matter to the pupils.

Holzberger et al. (2020) mentioned that the association between students' performances and school-associated variables may well be changed viably and developed. A research results showed that the relationship between the school-associated variables and students' achievement may change depending on the particular school factors (Supports et al., 2016; Quin, 2017). The study conducted by Holzberger et al. (2020) uncovered that there are solid connections between school socioeconomic status composition; outside school activities; schools' academic pressure; instructional practices; classroom climate and student' achievement. Ker (2016) found the students financial foundation, domestic and school resources have influences on students' performances.

2.4.1 The Concept of Teaching-Learning Resources

In the teaching process, teachers use a range of training materials that are known as teaching-learning resources. Teaching materials are educational tools and tools used in schools to help students learn. They're used to help students follow instructions and reach their goals, as well as to help them engage in learning activities like assessments. They help to create a learning experience that's more engaging, active, and engaging. Examples of teaching materials include realia, audio visual, and audio-visual materials. Audio-visual materials are those that use hearing aids like tape recorders or radios, while audio-visual materials use computers, movies, or TVs. Technical resources include charts, diagrams, textbooks, maps, the internet, and electronic or audiovisual learning resources, such as tape recorders, radio cassettes, televisions, laptops, phones, overhead projectors, classrooms, computers, and improvisation materials. other learning resources include writing implements, such a rubber, workbooks, crayons, pens, coloured pencils, chalks, note books, drawing books, registers, exercise books, slates, and paper. A scientific laboratory





with the necessary tools, such as a test beaker, insulators, tube, volumetric flask, and capacitor. When performing simple demonstrations and practical work, these resources are crucial. Both individually and in groups, students need these resources (Blazar & Kraft, 2017). Teaching materials are used to give students the information skills they need to learn and support institutions. In some African countries, teaching materials are becoming more and more accessible, with rural schools becoming more accessible and urban schools becoming more accessible. According to a World Bank report from 2012, some countries in Africa don't have enough money to cover the costs of education. The same was said in Obara and Was' report on education for all in sub-Saharan Africa (2020). Teaching and learning resources assist both teachers and students in their personal development. They enhance student participation in child-centered teaching and learning strategies (Machaba, 2013). Utilizing educational resources helps students succeed academically. Ashiono, Mwoma, and Murungi's (2018) research indicates that integrating ICT into classroom instruction increases students' motivation to learn and enhances their ability to recall information. Teaching-learning resources can have a significant impact on the success of students and schools, as evidenced by the findings of the study by Kipngetich, (2017). These resources can enhance teaching effectiveness, identify the individual needs of different learners, and enhance lesson plans. Without adequate teaching and learning materials, a school's primary objectives of teaching and learning in order to achieve high academic performance can be significantly hindered, regardless of the school's personnel (Saad, 2020). Since they captivate science students' interest and excite, stimulate, and hold it, instructional resources come in a variety of forms that can be used to promote development.



2.4.2 Teaching-Learning Materials in Schools

Teaching and learning outcomes have been linked to the availability of resources, and to improve schools that are not performing optimally, educational institutions must increase student levels and self-assurance through the use of these resources in order to prepare students for national examinations (United Nations Educational, Scientific and Cultural Organization, 2015). Developing educational materials and distributing resources can help to achieve this. A range of materials are available to help teachers fulfil the requirements and choose the interests of their students, ranging from textbooks to library books to websites. Material resources, physical facilities, and people resources are the three categories into which TLR have been divided (Akungu, 2014). Only physical resources (library and laboratories) and material resources (blocks, charts, computers, projectors, chemicals, etc.) were the subject of this investigation. Resources for teaching and learning may include text, audio, or video. In accordance with the requirements of MOE (2011) there is a wide range of educational resources available, such as the chalkboard, textbooks and magazines, wall coverings, graphs, charts, atlases and globes, and specimens, including living and preserved items, models and jigsaw puzzles. According to a study, the majority of the resources utilized in computer-assisted teaching and learning include audio and video recorders, slide projectors, opaque projectors, overhead projectors, still photographs, program instructions, film strips, and graphs (Aduwa-Ogiegbaen et al., 2005). MOE (2012) acknowledges the significance of these resources for students' academic success. In this report (MOE, 2012), it was highlighted that overcrowded classrooms caused by rising enrollment had put a burden on the resources, lowering the quality of instruction. compromises the standard of education. Regmi and Jones, (2020) pronounce teaching and learning materials as enablers for teacher and students' demonstration in the classroom situation used to enhance teaching strategy and pupils learning. Frimpong, (2021) highlighted the importance of instructional materials

availability in achieving effectiveness in school system teaching and learning process and supervision (Yeboah, Abonyi, & Luguterah, 2019). Additionally, Abdu Raheen (2014) explained that teaching resources make learning concepts simple and comprehensive to the pupils.

2.4.3 The Effect of Teaching-Learning Resources on Student Performance

In the classroom, teaching-learning resources are used to help the teacher present and communicate educational content and achieve educational goals, while assisting the schoolchildren to acquire knowledge and identify different abilities and values (Bušljeta, 2013). Teaching materials used in teaching have a lot of goals in common: to motivate students, to encourage creativity, to remind them of what they already know, to help them understand, to organize and synthesize the material, to help them think logically and logically, to help them interact and communicate, and to help them develop different skills and to help them reach their goals. It's all about making sure they remember what they've learned and retain the attitudes and skills they need to succeed (Bušljeta, 2013). Regmi and Jones, (2020) pronounce teaching-learning materials as enablers for teacher and students' demonstration in the classroom situation used to enhance teaching strategy and students learning. In Abdu raheen's (2014) manuscript, he talks about how teaching resources just explain things to the students and cover a lot of ground. Also, Frimpong (2021) stressed how important it is to have access to the right materials when it comes to teaching and learning in the school system, as well as overseeing the process. Arafah et al. (2021) presents a case study using the Six Sigma methodology to improve academic performance, demonstrating the applicability of quality improvement tools in education. Amaliah et al. (2023) and Purbosari et al. (2024) explore the impact of academic flow, digital literacy, and innovative pedagogical approaches like Project-based Learning (PjBL) on student academic achievement. Yeboah, Abonyi, & Luguterah (1919) stated the use of television and the internet has enabled learners to gain insight into the way they





are perceived through sound, resulting in a greater emphasis on visual and auditory stimuli. Our educational system would not be what it is today without the use of multiple learning tools, such as audio and video recordings and the internet. Teaching and learning materials are designed to make the educational process more interactive and engaging, to facilitate active learning, to support the development of different abilities, and to foster the acceptance of accepted values and attitudes among learners. To accomplish these objectives, it is essential to accurately identify the conditions and techniques for the use of teaching-learning materials within the classroom. For example, a well-equipped and utilized science laboratory offers students the chance to gain knowledge in practical science. Selecting the right teaching and learning tools can lead to the development of nurturing concepts for use in the classroom (Frampong, 2021). They also facilitate the extraction of abstract ideas into a process of comprehension (Odhambo, 2018). The successful delivery of a curriculum course necessitates the provision of appropriate and suitable premises, equipment, and educational resources. Institutions should ensure that teaching-learning resources are utilized and made available to all students in accordance with Moodley (2013), in order to enable learners to be actively engaged in the educational and instructional process. According to Frimpong (2021), interactions during lesson delivery may not be effective due to a lack of teaching materials. Studies have shown that the use of learning resources has a significant impact on curriculum implementation. Learners retain 90% of the information they say, observe and do. Learning resources also help to pull the often-abstract concept into an understandable flow (Maina, 2015). According to Butcher (2015), students need learning materials that are customized to their needs. Students in an inclusive setting would need additional materials beyond what the school provides. For this reason, teachers should utilize locally available materials to support inclusive learning. Moodley (2013) suggests that using locally available materials can also help to alleviate



problems and allow teachers to deliver better. According to Othoo (2019), learning-learning materials play a significant role in academic performance. The study looked at public secondary schools and found that learning-learning materials had a significant impact on learner performance on exams. Lewinski (2015) looked at how classroom architecture affects academic performance and found that a lack of structure has diverse impacts on learning. In 2016, Awolaju (2016) found that the quality of teaching-learning materials in senior secondary schools had a significant impact on students' academic performance in biology. In 2017, Deku (2017) found that there was a lack of teaching-learning resources for students with disabilities. Additionally, the lack of curriculum support materials limited teachers' ability to use various content-based teaching and learning activities to effectively deliver the curriculum. Due to the poor learning environment, students from public schools do not perform as well as those from private primary schools due to a lack of educational materials and teachers (Ongaki (2014)). Poor teaching-learning materials lead to poor strategies and passive learning, resulting in low performance. As technology and communication have become more sophisticated, more effort has been put into the development of teaching and learning tools, which has been beneficial for learners in many parts of the world. In 2019, Bukoye (2019) found that there is a very strong positive correlation between learning materials and academic performance. He also found that schools with more resources may produce better results than those with less resources. According to another study, school environment factors such as frequent interference of outsiders in the school premises, insufficient and poor utilization of teaching and learning resources affect the pupil's academic achievements in schools (Mpiani, 2012). Adalikwu (2013) shows that the quantity and value of learning and teaching resources have an effect on students' performance. The researchers found that learning centres with sufficient facilities, such as textbooks, are more likely to achieve good exam marks than schools with

insufficient amenities. Poor performance may be due to a lack of education and learning tools and training. The upkeep and growth of physical facilities in learning centers must continue to be a priority for parents sponsors and community.

2.4.4 The Effect of Physical Infrastructure on Student Performance

School infrastructure has lots of benefits to the society. School infrastructure has been shown to facilitates many advantages in schools including students learning and achievement (Barrett et al., 2019). Infrastructure matters a great deal in creating support that changes teachers and learners practice and believes in schools (Shirrell, Hopkins, & Spillane, 2018). Infrastructure determines the level of development and competitive economic growth of nation (Palei, 2015) which is important for educational success. Investment in educational infrastructure is an important step towards modernizing the country's schools and providing all schoolchildren with the prospect to succeed in a healthy and productive environment (Jackson, 2021). This includes having additional classrooms, upgraded technology such as computers and digital projectors, and improved sanitation systems. The availability of the infrastructure the local schools put in place to support learning predicts teacher's interactions and their instructional practice (Shirrell, Hopkins, & Spillane, 2018). Bonner et al. (2010) study found that the state, location, and type of school infrastructure had a significant influence on the accessibility, quality, and outcomes of education. Fisher (2001) found there is a causal association between school infrastructure and schoolchildren performance and comportment to study. This is confirmed by the results of Okongo (2015), Ngao (2015), Rop (2015), and Nyongesa's (2015) who established schools owned by people who do well because they have the right infrastructure and learning & teaching resources. Consequently, it is essential that school infrastructure is designed to meet the needs of schoolchildren and provide a more conducive learning environment (Bonner et al., 2010). In schools where the community has





been involved, there's been progress in improving the educational system and making sure it's sustainable, but the quality and type of education provided by the community isn't always top-notch and hasn't been able to tackle teaching-learning issues (Wedam, Quansah, & Debrah, 2015). The lack of such amenities hinders the learning process. The importance of school amenities in relation to quality teaching was demonstrated by Ndirangu and Udoto (2011). The physical facilities of the school include the lecture hall, classroom, administrative block, auditorium, laboratory, playground, special rooms (e.g. clinic conference hall, learner's hostel, employee's quarters), canteen/kitchen, toilets, etc. According to Ndirangu (2011), the quality of the school amenities is linked to the quality of the teaching. Ndirangu (2013) further argues that having a sufficient supply of good physical infrastructure increases the productivity of learning. Figueroa, Lim, and Lee (2016) argue that the physical and institutional conditions of the school prevent a society of achievement. Crampton, (2009) stated that Investment in school physical infrastructure have about 55.8% and 77.2% influences on schoolchildren achievement. The study Asiyai, (2012) investigated school infrastructure in public senior high schools and the findings exposed that school facilities were mostly in poor shape with insufficient maintenance.

2.4.4 Class size and pupils' academic performances

The relationship between class size and pupils' academic performance has been extensively studied, with varying conclusions. Tsafe (2014) suggests that class size does impact students' academic achievement, particularly in mathematics and science, and recommends structural expansion to improve learning environments. Wang and Calvano (2022) expands the discussion to include classroom dynamics and subjective educational outcomes, indicating that student engagement and teacher interaction are crucial for success, regardless of class size, but larger



classes may reduce these interactions and student satisfaction. Sanders et al. (1997) emphasizes the dominant influence of teacher effects over class size on student academic gain. Blatchford et al. (2003) supports the notion that smaller class sizes benefit children's academic attainment, especially for lower attainers, and affect classroom processes. Francis and Barnett (2019) find that preschoolers in smaller classes gain more in literacy skills, although no significant differences were observed in other areas. Gerber et al. (2001) reports minimal impact of teacher aides on academic achievement, suggesting that class size alone may not be the determining factor. Browning and Heinesen (2007) identifies modest negative effects of larger class sizes on educational attainment, with more pronounced effects for less advantaged pupils. Werang et al. (2022) does not directly address class size but highlights the importance of teacher performance and student motivation in academic achievement. Singh (2023) focuses on teacher professional development as a key to improving student achievement, rather than class size. Lastly, Ohinata and Ours (2013) examines the impact of immigrant children in the classroom on native Dutch children's educational attainment, without strong evidence of negative effects due to class size. On the whole, while there is evidence to suggest that smaller class sizes can positively influence academic performance, particularly for certain subgroups or subjects, the impact of class size is not uniform and may be less significant than the effects of teacher quality, student engagement, and motivation (Blatchford et al., 2003; Browning & Heinesen, 2007; Francis & Barnett, 2019; Sanders et al., 1997; Tsafe, 2014; Wang & Calvano, 2022; Werang et al., 2022). The classroom background and the amount of work by the teacher together add to the complexity of the problem (Gerber et al., 2001; Ohinata & Ours, 2013). The impact of class-size on academic achievements is obvious, and it could be facilitated by the teaching approaches used by teachers and teacher-student cooperation (Blatchford et al., 2003; Singh, 2023). Conclusively, while smaller class sizes



have been associated with certain academic benefits, the overall impact of class size on pupils' academic performance is multifaceted and interdependent with other educational variables. Teacher effectiveness, student engagement, and classroom dynamics play significant roles in the academic success of students, and these factors should be considered alongside class size in efforts to enhance educational outcomes (Blatchford et al., 2003; Sanders et al., 1997; Singh, 2023; Wang & Calvano, 2022).

2.5 The Need for Quality Education

Education is the pillar of any nation and has a significant impact on the prosperity and well-being of its people. The influence of education is capable of advancing economic growth and enhancing social mobility (Joshi, 2017). Currently, majority of Ghanaians are classified as poor and live below the poverty line, though most of these poor people are rural dwellers (Kofinti & Annim, 2016). The higher poverty rate in Ghana demonstrates the inequality with regards to jobs, education, socio-economic and income distribution (Kofinti & Annim, 2016; Musah, Ibrahim, & Adam, 2016). Education is the best tool that can get rid or minimize such inequality by proving the citizens with relevant knowledge and skills that can help them acquire jobs and financial growth. To achieve economic growth and development in a country, the nation must take its educational system serious (Osei, & Zhuang, 2020). The Center for Public Education (CPE) argues that equity in education is achieved when all students have access to the resources, they need to graduate with the skills they need to thrive after high school (CPE, 2016). Education provides people with the tools and support they need to break out of poverty and increase income and wealth. According to our one at a time analysis of all education and poverty, the higher a population's educational level, the lower the poverty rate (Santos & Celis, 2020). Regardless of the goal, whether it's high school graduation, college success, or just completing elementary



school, policy makers aim to ensure an equitable and fair distribution of students' resources to achieve their goals including adequate school facilities to ensure that every member of every age group has the chance to attend school. Equity is a global goal with implications for the building environment. It includes every gender, people with disabilities, urban and rural and marginal area populations; people in transition; working children; and young people.

factor school-associated with students' performance

The factors associated with students' performance are multifaceted, encompassing family environment, psychological characteristics, learning strategies, attendance, and the educational system itself. Family factors such as income and parental relationships have a direct and indirect impact on academic performance, influencing both material resources available for education and the psychological well-being of students (Xing, 2023). Psychological traits like character strengths and effective learning strategies are also significant predictors of academic success among international students (Rajabbeigi et al., 2023). Attendance has been positively correlated with performance in specific academic modules, highlighting the importance of student engagement (Samuel & Marimuthu, 2021). Contradictorily, while some studies emphasize the role of mental health in academic achievement, others find no correlation between the two, suggesting that achievement motivation may be a more critical factor (Mahdavi et al., 2023). Moreover, the educational environment, including the closed management system and the learning climate, significantly affects student performance (Hadi et al., 2022; Liu & Dellova, 2023). Societal, home, and school environmental factors, particularly in the context of learning a foreign language, can either foster or hinder academic achievements (Amiri & El Karfa, 2022). Notably, students may not see character and emotional features as crucial for education, as an alternative they consider academic achievement as a many-sided interconnection of various agents beyond academic

performance (Yaroshevskaya & Sysoeva, 2018). The parents' academic ambitions and involvement are further emphasised as crucial indicators of academic achievement, with many-mediating framework signifying the interrelationship between parental investment, students' ambition, in addition to contextual variables such as socioeconomic standing (Xiuying et al., 2020). Largely, pupils' success is impacted by a confluence of societal, institutional, personal, and familial factors. Whereas certain factors, for example, income of the household and learning behaviour, straightly affect achievement and other factors such as mental-health and factors relating to the environmental, may show more multifaceted effects. The interaction of these agents stresses the need for an all-inclusive approach to comprehend and increase student success. To successfully support pupils' academic achievement, educational institutes and legislators need to consider these diverse effects (Amiri & El Karfa, 2022; Hadi et al., 2022; Liu & Dellova, 2023; Mahdavi et al., 2023; Rajabbeigi et al., 2023; Samuel & Marimuthu, 2021; Xing, 2023; Xiuying et al., 2020; Yaroshevskaya & Sysoeva, 2018).

2.6 School-connected factors and academic achievements of students

Academic achievement student is' influence a variety of factors in the school environment. Hadi et al. (2022) found that the educational institution's teaching and learning environment is an important determinant in academic achievement. Maan (2023) extends on this concept by investigating how the school environment influences academic achievement and student satisfaction. According to the study, cognitive stimulation and teacher acceptability improve student happiness, however perceptions of control have a negative impact on performance. Werang et al. (2024) emphasize the importance of the school environment in molding academic outcomes, along with other factors such as family support, teacher morale, and student motivation. Aneke

(2022) also emphasizes how the learning environment, including the infrastructure and the quality of the teachers, influences academic performance.

An alternative perspective is offered by Maan (2023), demonstrating that components of the educational setting, such as intellectual stimulation and control, do not properly predict students' current academic achievement. Furthermore, Borland and Howsen (2003) discovered that, after controlling for student aptitude, there is a nonlinear link between school size and achievement.

On the whole, students' academic performance is greatly influenced by their school environment. While some research shows that a well-resourced and encouraging school environment directly improves student outcomes (Aneke, 2022; Hadi et al. 2022; Werang and associates. , 2024), others contend that there may be a complicated and non-trivial relationship between certain environmental factors and academic achievement (Maan, 2023). However, the majority of the data points to the idea that a supportive and well-run learning environment can significantly boost students' academic performance (Aneke, 2022; Hadi et al., 2022; Maan, 2023; Werang et al., 2024).

Academic achievement has also been demonstrated to be influenced by peer relationships. Through learning motivation and engagement, these relationships may have a direct or indirect impact on academic outcomes, according to research (Shao et al. in 2024). Academic performance has also been found to interact with individual student characteristics, such as time beliefs and learning interests, suggesting that personal characteristics can mitigate the effects of school-related factors (Ishii et al., 2016).





2.6.1 Students academic achievements and teacher absenteeism

The relationship between teacher absenteeism and student performance has been the subject of numerous studies, most of which have come to the conclusion that students' academic performance suffers when teachers are absent. Aslam et al. (2023) found a direct link between teacher absences and primary school kids' academic performance, highlighting that it leads to behavioral problems and decreased learning enthusiasm. As a result, Rukhsana et al. (2020) found a link between teacher absence and lower student accomplishment, identifying remuneration and motivation as important determinants. These findings are corroborated by Bayeke et al. (2024), who indicate that absenteeism has a negative impact on secondary students' academic performance and urge improvements to school infrastructure and teacher attendance. As an alternative viewpoint, Seah (2018) makes the surprising conclusion that immigrant instructors, who were supposed to increase absenteeism, have no negative impact on native students' academic ability. Furthermore, Hossain (2023) contends that, while absenteeism is widely regarded as detrimental, technology—specifically, smartphone-based communication—can help alleviate some of the negative consequences by facilitating engagement between teachers and students. On the whole, the literature predominantly supports the notion that teacher absenteeism is detrimental to student performance, with studies recommending policy interventions and improved school environments to address this issue (Aslam et al., 2023; Bayeke et al., 2024; Rukhsana et al., 2020). Overall, these findings underscore the importance of teacher presence and engagement in the educational process for enhancing student academic outcomes.

2.7 Cause of poor academic performance of pupils

The cause of poor academic performance in pupils is multifaceted, with studies identifying a range of contributing factors. Student-related factors as motivation and attitude play a significant role,



as evidenced by the findings from Salalah College of Technology, which highlighted these as having the highest impact on performance (Alami, 2016). Additionally, family or parental support, financial issues, and the quality of learning facilities and teaching techniques are critical, as shown in the Malaysian context (, 2022). In Zambia, factors such as poor teaching methods, inadequate composition writing skills, and insufficient teacher training in English Composition were identified (Phiri et al., 2023). Moreover, neurocognitive dysfunctions, particularly in attention, thinking, and audio-verbal memory, have been linked to underachievement in schoolchildren (Khokhlov & Slovenko, 2020). Interestingly, while teacher-related factors were deemed to have the lowest effect in Oman (Alami, 2016), teaching methods and teacher training were significant concerns in Zambia (Phiri et al., 2023). Furthermore, home environment factors like socioeconomic status and parental involvement were found to be influential in Ghana (Akrofi, 2020), while racial and linguistic minority status contributed to poor performance in South Africa (Dreyer & Singh, 2016). Interventions focusing on individual strengths and interests showed promise in reversing underachievement among gifted students (Emerick, 1992). School-based language policies also had a positive effect on reading performance in Belgium (Vanbuel & Branden, 2021). Personal risk factors such as socioeconomic status, labor, and behavioral difficulties were highlighted in Egypt (Hussein & Ouda, 2018), and psychological attributes like need for cognition and achievement motivation were significant in a broader student sample (Preckel et al., 2006). However, the potential of technology to alleviate some of the negative impacts of absenteeism should not be overlooked (Hossain, 2023). Meanwhile, Amaliah et al. (2023) finds that self-regulated learning does not significantly affect academic achievement, which contrasts with the general emphasis on self-regulation in educational literature. On the whole, poor academic performance is a complex issue influenced by a combination of student-related factors, family and

socio-economic background, teaching quality, neurocognitive development, and psychological attributes. Interventions to improve performance must therefore be multifaceted and tailored to address these diverse factors (2022; Akrofi, 2020; Alami, 2016; Dreyer & Singh, 2016; Emerick, 1992; Hussein & Ouda, 2018; Khokhlov & Slovenko, 2020; Phiri et al., 2023; Preckel et al., 2006; Vanbuel & Branden, 2021).

2.8 Strategies to improve academic performance of pupils

The strategies to improve academic performance of pupils are multifaceted, as evidenced by the diverse approaches and factors identified in the literature. Bressane et al. (2024) demonstrate the promise of artificial intelligence-based decision support systems in tailoring educational approaches to specific student needs, particularly for individuals with learning disabilities. These tailored study approaches may help to reduce the unfavorable impacts on academic attainment (Bressane et al., 2024). In a similar vein, Nosheen and Hussain (2020) show a favorable relationship between learning styles, study tactics, and academic performance, proposing the use of effective learning and study strategies to improve academic results.



There are some fascinating contrasts when looking at the connection between instructor behavior and reflection. Although Zhai et al. (2023) note that reflective interventions have a significant effect on academic achievement, they also point out that a variety of factors can affect how successful these interventions are, suggesting that careful planning is required when developing reflective activities. According to Subedi et al. (2024), teacher conduct has a big influence on students' academic achievement. They stress the value of motivating teaching methods and constructive teacher-student relationships.



According to the studies, the use of AI tools for personalized learning (Bressane et al., 2024), the implementation of effective study and learning strategies (Nosheen and Hussain, 2020), the inclusion of reflective practices (Zhai et al., 2023), and the promotion of positive behavior from teachers (Subedi et al., 2024) are all recommended as ways to enhance academic achievement. By carefully putting these ideas into practice, a helpful and productive learning environment can be created in which all students can achieve academic success. This finding agreed with the results by Monks and Robert (2011) who reported that class size negatively affects students' assessments and outcomes.

2.9 Educational success and development

Educational success and development are multifaceted constructs influenced by a combination of cognitive and non-cognitive factors. Cognitive factors such as intelligence and academic abilities have traditionally been emphasized, but recent research acknowledges the significant role of non-cognitive skills in educational achievement (Khine, 2016). Genetic influences, as indicated by polygenic scores, also contribute to academic adjustment in adolescence and educational attainment in adulthood, with distinct genetic influences related to behavioral disinhibition (Hicks et al., 2021). Interestingly, the role of parental involvement and educational expectations varies according to socioeconomic status and prior achievement, suggesting that interventions should be tailored to the needs of different student groups (Benner et al., 2016). Moreover, the relationship between educational expectations and attainment is stronger for students with higher achievement levels, indicating that merely having high expectations may not suffice for students with lower academic performance (Fishman, 2022).

Research indicates that students' own views on educational success emphasize achievement motivation and self-evaluation over personality traits and emotional characteristics



(Yaroshevskaya & Sysoeva, 2018). The transfer of educational advantages across generations appears to be constrained, with direct effects not persisting beyond three generations, and the educational level of intermediate generations playing a crucial role (Evans et al., 2021). The educational goals of adolescents significantly contribute to their academic attainment, regardless of family background and academic performance (Marjoribanks, 2005).

Furthermore, the interplay among adolescents' cognitive habits, learning environments, and affective educational outcomes impacts their academic performance; these interrelationships are impacted by a number of mediating and moderating factors (Marjoribanks, 2006).

Overall, genetic predispositions, family history, personal goals, and cognitive and non-cognitive factors interact in a complex way to influence educational success and development. Previous accomplishments, educational environment, and socioeconomic status all affect how much of an impact these factors have. Customized interventions that target structural injustices and cognitive and non-cognitive factors may be the most successful in promoting academic achievement among a variety of student populations (Benner et al., 2016; Evans et al., 2021; Fishman, 2022; Hicks et al., 2021; Khine, 2016; Marjoribanks, 2005; Marjoribanks, 2006; Yaroshevskaya & Sysoeva, 2018).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter discusses the procedures that were used during the investigation. It describes the target population, study region, research design, sampling strategies, data kinds and sources, questionnaire design, data collection process, and data analysis. This study unit's primary goal is to provide an account of the entire research process.

3.1 Study site

The Tamale Metropolis in the Northern Region of Ghana is a focal point for various studies due to its dynamic socio-economic and cultural landscape. The three main areas of the Tamale Metropolis were the sites of the study. The South, Central, and North zones make up the metropolis. Tamale Metropolis is well situated in the middle of the Northern Region, bordered to the north and west by Sagnarigu District, to the east by Mion District, to the south by East-Gonja, and to the south-west by Central-Gonja. Geographically speaking, the Metropolis is located between latitudes 9°16 and 9° 34 North and longitudes 0° 36 and 0° 57 West. It contains 115 villages, 19,387 homes, 6.3 people per household, and a total population of 233,252 people, with

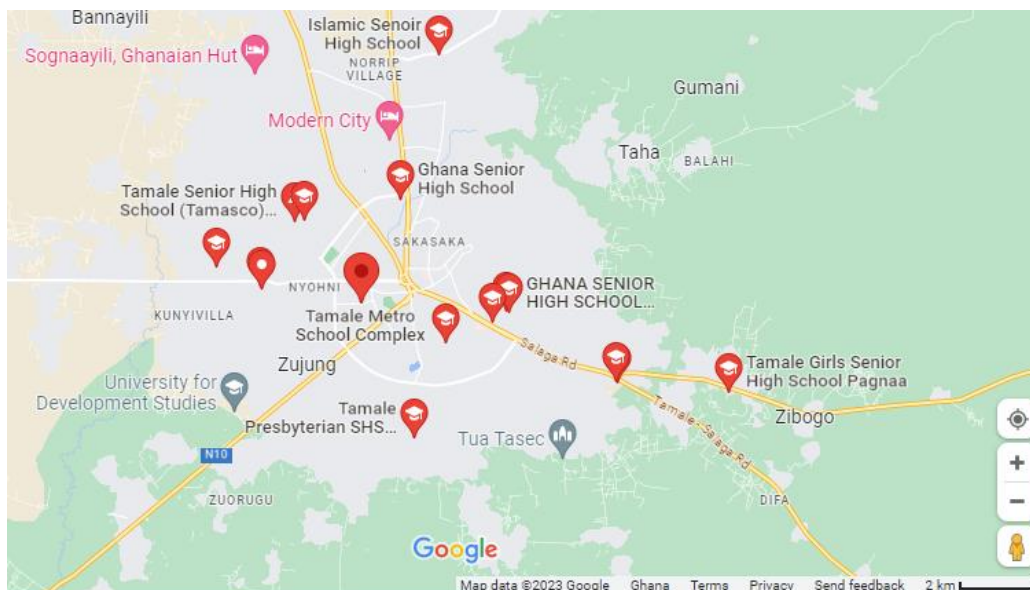


80.8% and 19.1% of them residing in urban and rural regions, respectively, according to data from the 2010 Population and Housing Census. Furthermore, the majority of households (46.1%) have an extended structure, with children making up the majority of the household (40.4%) and fewer household heads (16.1%). There are 742 elementary schools in the city, including 14 senior high schools, 112 junior high schools, 304 primary schools, and 94 kindergartens. 39.9% of people in the population (aged 11 and over) are illiterate, whereas the majority (60.1%) are literate.

In the metropolis, 84,897 people (aged 3 and older) are enrolled in school right now (45.1% female and 52.9% male). Of these, 15.1% are in the nursery, 18.2% are in JSS/JHS, 12.5% are in SSS/SHS, and the largest percentage (40.0%) is in primary. In the past, 58.6 and 41.4 percent of males and females, respectively, have attended school. 15.1 percent of those enrolled in school are in nursery, 18.2 percent are in JSS/JHS, 12.5 percent are in SSS/SHS, 5.7% are in tertiary institutions, and the majority (40.0%) are in primary. The original customary land is owned by a group of people called Dagombas, who are primarily Islamic people and speak Dagbani. Despite the diversity of religions, cultures, and languages in the city, people coexist harmoniously. According to the Government of Ghana Portal, of the total population in the region, 83.4% is employed in the informal sector, 11.5% is in the private sector, and very few people are employed in the formal sector. Sixty-three percent of entrepreneurs in the informal sector have never attended formal school (Alhassan, Hoedoafia & Alhassan, 2016). A survey conducted in 2016 by Alhassan, Hoedoafia, and Alhassan revealed that a large number of the city's enterprises are unregistered.

There different aspects of life and development within the metropolis, ranging from land resource development decisions (Ampofo, 2021) to environmental challenges such as flooding (Ampofo et al., 2024), and from health-related behaviors like contraceptive uptake (Abdulai et al., 2020) and

breast cancer awareness (Korankye et al., 2016) to waste management practices (Adongo et al., 2015). The Metropolitan area is also unique in terms of socio-cultural practices like fostering's effect on education (Alhassan et al., 2022), honey's bacterial quality (Adadi & Obeng, 2016), vaccination card retention (Konlan et al., 2024), adherence to iron and folic acid supplementation (Wemakor et al., 2020), and sustainable hotel industry practices (Safo et al., 2023). It's interesting to note that some research points to a complicated interaction between environmental, health, and development concerns in the city. The Tamale Metropolis is often defined by a combination of progressive advancements in a number of industries and developmental problems.



Source: (Google Maps)

Figure 1: The main senior high schools in Tamale Metropolis and Sagnarigu Municipal are shown on the map.

3.1.1 Research philosophy

The research philosophy is pragmatism. Pragmatism is usual used along with mixed-methods and it focuses on the findings and the research questions more instead on the approaches (Kaushik &





Walsh, 2019). According to Kelly and Cordeiro (2020), pragmatism is a valuable paradigm for examining institutional processes because it provides a guiding epistemological framework rooted in the inquiry process and research practice. When a study uses mixed techniques and prioritizes the study questions and results over the approaches, it is referred to as pragmatic (Kaushik & Walsh, 2019). Three basic methodological concepts underpin a pragmatic approach to research, according to Kelly and Cordeiro (2020): focusing on actionable facts; recognizing the links between experience, knowledge, and action; and considering research as an experiential process. Research demonstrated that pragmatism can strengthen disadvantaged and underprivileged populations and offer concrete proof for the macro-level analysis (Kaushik & Walsh, 2019).

3.1.2 Study Approach

A mixed technique approach was used in this study. According to Halcomb and Hickman (2015), mixed methods research combines qualitative and quantitative research techniques to offer a thorough examination of research problems. By utilizing the advantages of both qualitative and quantitative data, this method works especially well for developing a comprehensive grasp of complicated phenomena (Fetters, 2021). Because it increases the depth and breadth of understanding, mixed methods research is becoming more and more popular in a variety of fields, such as education, medicine, and the social sciences (Foroudi et al., 2021; Grace et al., 2023). Reflexive integration is suggested as a methodological approach to increase the openness and depth of investigation in mixed methods studies (Olaghere, 2022). To effectively apply research findings in practice, new researchers must comprehend the vocabulary and procedure of mixed methods research (Ingham-Broomfield, 2016). The application of mixed methods research to disciplines like economics, tourism, and pedagogy demonstrates its adaptability and emphasizes the significance of taking ontological and epistemological presuppositions into account (Cronin,



2016; Mason et al., 2021; Matovic, 2015). In conclusion, mixed methods research is a useful strategy that combines qualitative and quantitative methodologies to enable a more nuanced understanding of study topics. Even though mixed methods research is complicated, with careful planning and execution, a well-designed study can produce meaningful and significant findings (Cronin, 2016; Decuir-Gunby & McCoy, 2022; Feters, 2021; Foroudi et al., 2021; Grace et al., 2023; Ingham-Broomfield, 2016; Mason et al., 2021; Matovic, 2015; Molina-Azorin & Feters, 2016; Olaghere, 2022).

more accurate and trustworthy results than either method alone, it is used as an alternate strategy (Halcomb & Hickman, 2015). According to Aspers and Corte (2019), qualitative research is a method that advances science by producing new, noteworthy distinctions through a more thorough analysis of the topic being studied. Data regarding experiences, meanings, and views are gathered using qualitative approaches, which heavily rely on participants' subjective assessments (Hammarberg, Kirkman, & De Lacey, 2016). The technique of measuring study populations in order to provide numerical data is known as quantitative study (Rutberg & Boukhisidi, 2018). Furthermore, surveys and experiments are frequently used in quantitative research to get numerical data (Jopling, 2019).

3.13 study design

According to Siedlecki (2020), research design is the configuration of parameters and techniques that guides choices made during data collecting and analysis, increasing the study's findings' applicability to its objectives. The exploratory sequential mixed methods design was employed in this investigation. A study strategy known as exploratory sequential mixed methods design begins with the gathering and examination of qualitative data, followed by the gathering and examination of quantitative data. Finding crucial information that will direct the subsequent quantitative phase



is the goal of the exploratory qualitative phase (Agyeiwaah, 2022; Chiarini & Kumar, 2021; Jafer et al., 2021; Kandiero & Makuwatsine, 2022; Su et al., 2023; Wess et al., 2022). This strategy is particularly useful in areas where research is limited or where understanding complex processes requires adaptation. By overcoming the limitations of using a single technique, it allows for a comprehensive understanding of the subject (Agyeiwaah, 2022). It also emphasizes how important qualitative research is in bolstering quantitative findings, which raises the value of qualitative approaches in the mixed methods paradigm (Boivin, 2021). Exploratory sequential mixed methods design is often a good way to look at complex research topics. It ensures a thorough examination of the research topic by providing a structured yet flexible framework that may be adjusted to the needs of the study. The design's strength is in its capacity to produce a quantitative phase that is deeply informed by qualitative insights, leading to outcomes that are more contextually rich and nuanced (Agyeiwaah, 2022; Boivin, 2021; Chiarini & Kumar, 2021; Jafer et al., 2021; Kandiero & Makuwatsine, 2022; Maleku et al., 2020; Su et al., 2023; Wess et al., 2022). At several phases of the study, such as methodological (data collecting, data analysis), and reporting/data interpretation phases, this design permits data integration—an organized technique of combining quantitative and qualitative data—to occur (Creswell & Clark, 2017).

3.3 Population

A population is defined as the entire set of people, things, or events that share a particular observable trait (Basti & Madadzadeh, 2021). Additionally, Moser and Korstjens (2018) define a target population as the entire number of people or components of the phenomenon under investigation that exist within the study region. According to a study, a target group is made up of people who fit specific requirements for the inquiry and who can offer reliable information pertinent to the goal of the study (Basti & Madadzadeh, 2021). Items, phenomena, events, or



collectives with certain characteristics that the researcher plans to examine in order to draw generalizations may be referred to as the "target population" in this context. The current study was conducted in junior high schools in the Tamale Metropolis of Ghana. The target population for this study were final year students and their teachers from the 144 private and public junior high schools in the Tamale Metropolis, including their headteachers.

3.4 Sample and sampling procedure

Sampling is the process of choosing a subset of a target population for a research study (Moser & Korstjens, 2018). Selecting a subset of people, things, or events from a larger population in order to examine and gain knowledge about that group is known as sampling, and it is a crucial process in research. The validity of the study's findings depends heavily on the sample's accuracy and representativeness (Bhardwaj, 2019). According to Bhardwaj (2019) and Hossan et al. (2023), a number of sampling approaches can be broadly classified as either probability sampling methods or non-probability sampling methods.

The group with similar characteristics that had the necessary data and were prepared to provide it was the focus of the investigation. Only junior high schools in the Tamale Metropolis were included in the study. The Metropolis' JHS 3 (last year's teachers and students) was the specific focus of the study. There are 22 circuits in Tamale Metropolis. The sampling strategy used in this study was multi-phase. In survey research, multi-stage sampling is a method used to choose a sample from a wider population. According to Sharma (2017), multi-stage sampling is the process of selecting samples through a number of steps, typically beginning with bigger entities like geographical areas and progressively concentrating on smaller units like households. To ensure that different groups are represented, this strategy can be split at each stage (Endo et al., 2016). When the target population is too big to sample in a single occurrence, multi-stage sampling is



used. Basti and Madadzadeh (2021) mention that this sampling technique selects a starting sample and then makes more selections to get the desired sample.

Based on previous research, 12 schools were selected from the 144 junior high schools in the Tamale Metropolis using simple random sampling for the quantitative part (Bonsu et al., 2023; Singh & Masuku, 2014). All 144 schools were coded on separate papers, and 12 schools were chosen at random using the Singh & Masuku (2014) technique to guarantee representation of all the schools in the 22 circuits and equal chances of selection. The class size for the 12 schools were 126, 74, 45, 53, 46, 36, 61, 138, 55, 39, 102, and 84 making a total of 859 as shown in Table 4.1. Random sampling is a single-stage process where each unit in the population has an equal chance of being selected, and all possible combinations of units have the same chance of forming the sample (Singh, 2003). Random sampling is praised for its simplicity and theoretical properties, such as being unbiased and admissible under certain conditions (Emerson, 2015). However, random sampling may not always ensure a balanced representation, which can affect the robustness of inference for population totals (Sharma, 2017). Random sampling method have its applications and is chosen based on the research objectives, population structure, and resource availability (Emerson, 2015; Sharma, 2017; Singh, 2003).

In the qualitative part, the researcher purposely sampled all final year pupils and their teachers considering only Mathematics, Science and English Language teachers in the 12 schools. The study sampled 859 pupils from the 12 schools, 12 head teachers and 36 classroom teachers making a total of 907.

Purposive sampling is a non-probabilistic technique utilized in numerous research areas to choose a sample that most effectively meets the research goals (Campbell et al., 2020; Tongco, 2007). It



is selected for its capacity to deliver comprehensive and reliable information by focusing on those individuals who are most pertinent to the research inquiry (Campbell et al., 2020). This approach is especially useful in qualitative studies (Campbell et al., 2020; Etikan, 2016). Moreover, purposive sampling is often employed because of the subjects' availability and convenience (Etikan, 2016). The participants were carefully selected based on predetermined inclusion and exclusion standards. Table 3.2 below shows details of the researcher's criteria for recruiting and rejecting study participants.

Table 3.2: Inclusion and exclusion criteria for Participant Selection

Inclusion criteria	Exclusion criteria
Only final year pupils in the Junior High Schools who took part in the school mock examination.	Pupils in the Junior High Schools who did not take part in the school mock examination.
Only final year teachers who teaches Mathematics, Science and English Language	Other final year teachers who teach others subjects or didn't agree to participate in the study.

3.5 Data collection procedure

In this study, two types of data were collected, quantitative and qualitative data. The schools were reached with an introductory letter from the Tamale Metropolis GES office and the consent of the participants were sort for before data collection commence. First, the researcher conducted focus groups discussion with groups of 6-10 to obtained separate responses from the various groups for further analysis. After collecting the qualitative data, the researcher obtained secondary data on the pupils' performance in their mock examinations with emphasis on Mathematics, Science and

English Language. The performance for each school was calculated by summing the mean score of the pupils for each subject. Furthermore, teacher absenteeism was obtained from the log-books in each school and the rate of absenteeism was subsequently determined. In addition, the participants demographic data were also recorded.

3.6 Research Instruments

In this study, both quantitative and qualitative data were gathered. The quantitative data was pupils' examination scores, teachers' absenteeism and class sizes. However, focus group discussion was used to gather the qualitative data.

3.6.1 A guide for focus group discussion

A guide for the focus group discussion in this study was design considering previous reports (Kallio et al. 2016). A focus group discussion is a way to gather together people who share certain characteristics to discuss a specific topic of interest and through these interactions the researcher collect the information require to answer research questions (Moser, & Korstjens, 2018). The researcher can ask a series of open-ended questions without adhering to a preset order or sequence by using a semi-structured interview guide, which is a hybrid of structured and unstructured interviews (Kallio et al., 2016). Therefore, simple, straightforward and unambiguous questions were key to obtaining accurate answers.

3.7 Source of data

This study obtained both quantitative and qualitative data from secondary and primary sources.





3.7.1 Primary sources

According to Ajayi (2017), primary data in any research article is first-hand information gathered through study outcomes analysis. The responses of the selected participants from the focus group discussions served as the primary source of data.

3.7.2 Secondary source

According to Johnston (2017), secondary data in any research project is the information that has already been gathered or the primary data own by other party used in other study. It is used to increase the study's relevance and make detail meaning from that data. Secondary sources of data included in this study was school record books namely Teachers' Log-Books, records of pupil's performances, and Class registers.

3.8 Data analysis

This study obtained both quantitative and qualitative data which were analysed separately. The quantitative data were organized and analysed using SPSS Veersion 20.0 and presented using descriptive and inferential statistics. Simple linear regressions analysis was done to measure association and effect between teachers' absenteeism rates and class sizes as independent variables and pupils' performances as dependent variable. The qualitative data from the focus group discussions were analysed using thematic analysis.

3.9 Ethical considerations

This study was conducted according to the research guidelines proposed by research ethics of the University for Development Studies. In order to comply with the university's code of ethics, the researcher obtained an introductory letter from the Research Ethics Committee of the University for Development Studies to the GES office of Tamale Metropolis prior to the commencement of

data collection. The participants were informed of the project's purpose and their informed consent was sought to participate; their identities were kept in strict confidentiality during the recruitment process.

The university's code of ethics was upheld by keeping the participants' identities secret. Participants were urged to willingly opt-in and provide as much information as they could throughout the recruitment process. The study's objectives were the only ones for which the data were used. To avoid impersonation, the researcher identified themselves and gave details about the study's goals data collection. Respondents received a detailed explanation of the goal of the study as well as the specifics of the focus group discussions. Respondents were advised to answer as fully as possible without including their names or other identifying information, and participation was voluntary. Lastly, all the information that was collected during the course of this study was used only for the study's purposes.



CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Results

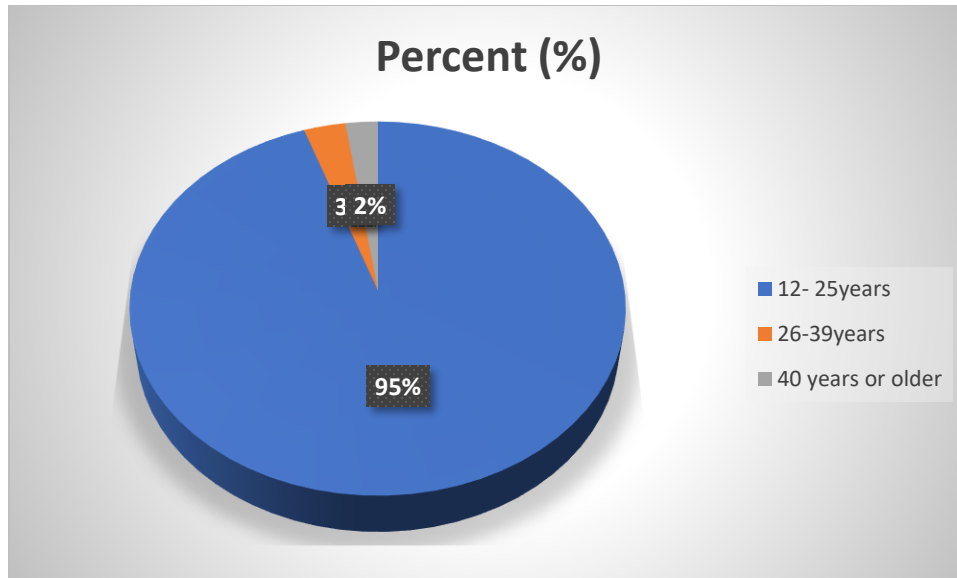
The main purpose of this study was to investigate the effect of school-associated factors on the performance of junior high school pupils. Specifically, the current research accessed the relationship between teachers' absenteeism and pupil's academic performance; how class size influences pupils' academic performance in basic schools in Tamale Metropolis; determined the cause of poor academic performance; and identified the strategies adopted to improve academic performance of pupils in basic schools. The findings of the study are presented and discussed with respect to the objectives of the study. This chapter entails the results of the data analysis. The results are presented with respect to the objectives of this study.

4.0.1 Background information

4.0.1 Age of participants

The ages of the participants in this study are presented in Figure 4.0.1. According to Figure 4.0.1, participants from 12- 25 years were 94.71%, 26-39 years were 2.98% and those from 40 years or older were 2.31%.



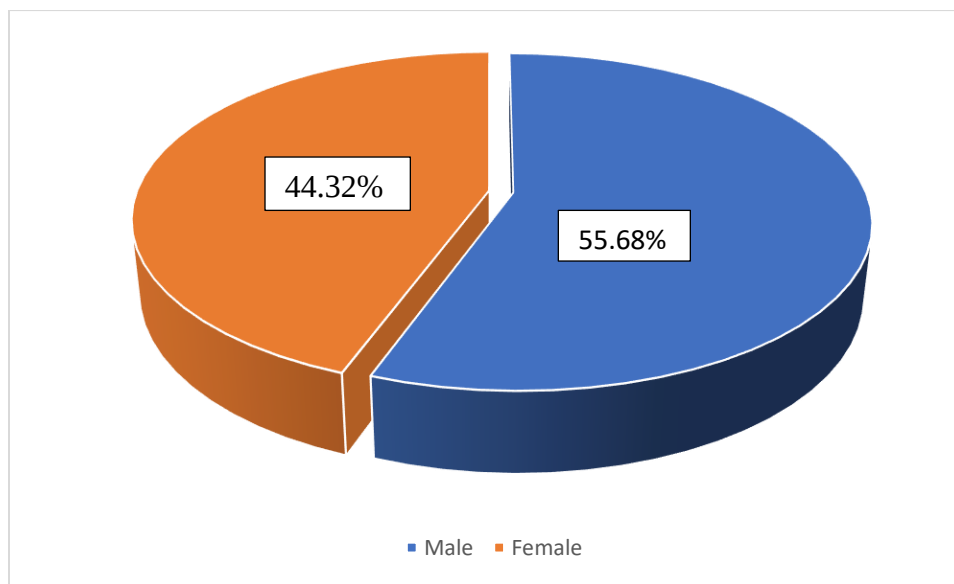


Source: (Field data, 2024)

Figure 4.0.1: Age of participants

4.0.2 Gender of participants

The gender of the participants in this study are presented in Figure 4.0.2. From Figure 4.0.2, 55.68% of the participants were males whereas 44.32% were females.

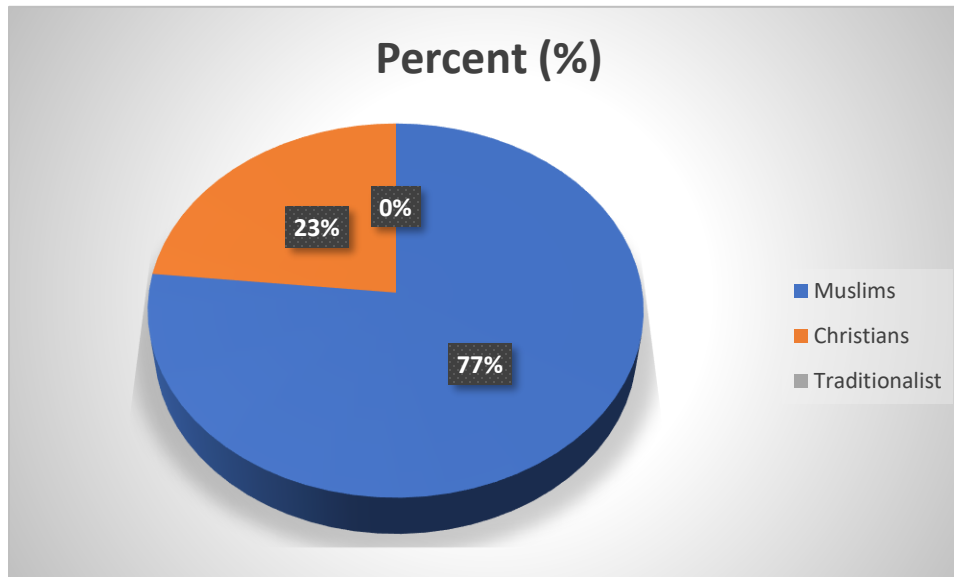


Source: (Field data, 2024)

Figure 4.0.2: Gender of participants

4.0.3: Religion of participants

The religion of the participants in this study are showed in Figure 4.0.3. According to Figure 4.0.3, 76.63% of the participants were Muslims whereas Christians were 23.37%. The results illustrated that non were a traditionalist.



Source: (Field data, 2024)

Figure 4.0.3: Age of participants

4.1 The relationship between teachers' absenteeism and pupils' performance

The first objective of this study was designed to assess the relationship between teachers' absenteeism and pupils' performance. Data was collected on pupils' performance, teachers' absenteeism and class sizes for the sampled schools and the results are shown in Table 4.1.



In Table 4.1, the mean score for the pupils in each school is an aggregated score consisting of the average scores in Mathematics, Integrated Science and English Language in their last mock examination before BECE. From the table, ‘school 10’ recorded the highest mean score of 224%, followed by ‘school 7’ (210%) and ‘school 5’ (198%). However, the least scores were observed in ‘school 11’ (96%) and ‘school 8’ (88%). Generally, the overall performance was low across the schools sampled.

Also, in Table 4.1, teacher absenteeism rate was estimated as the number of absent days divided by the total number of working days for a year expressed in percent. The days of teachers’ absenteeism were retrieved from the log books of each school sampled. According to the table, Teachers’ absenteeism rate was higher in ‘school 11’ (10.60%), ‘school 8’ (9.84%) and ‘school 1’ (9.09%). However, the least absenteeism rates were observed in ‘school 9’ (4.54%), ‘school 6’ (5.30%) and ‘school 3’ (5.30%). Largely, Teachers’ absenteeism rates were low across the schools sampled.

In addition, the class size of the final year students for each school was recorded in Table 4.1. According to the table, Class size was higher in ‘school 11’ (102), ‘school 8’ (138) and ‘school 1’ (126). Nevertheless, Class size was lower in ‘school 10’ (39), ‘school 6’ (36) and ‘school 1’ (45).

Table 4.1: The results on the pupils’ mean scores, teachers’ absenteeism rates and class sizes for the sampled schools.

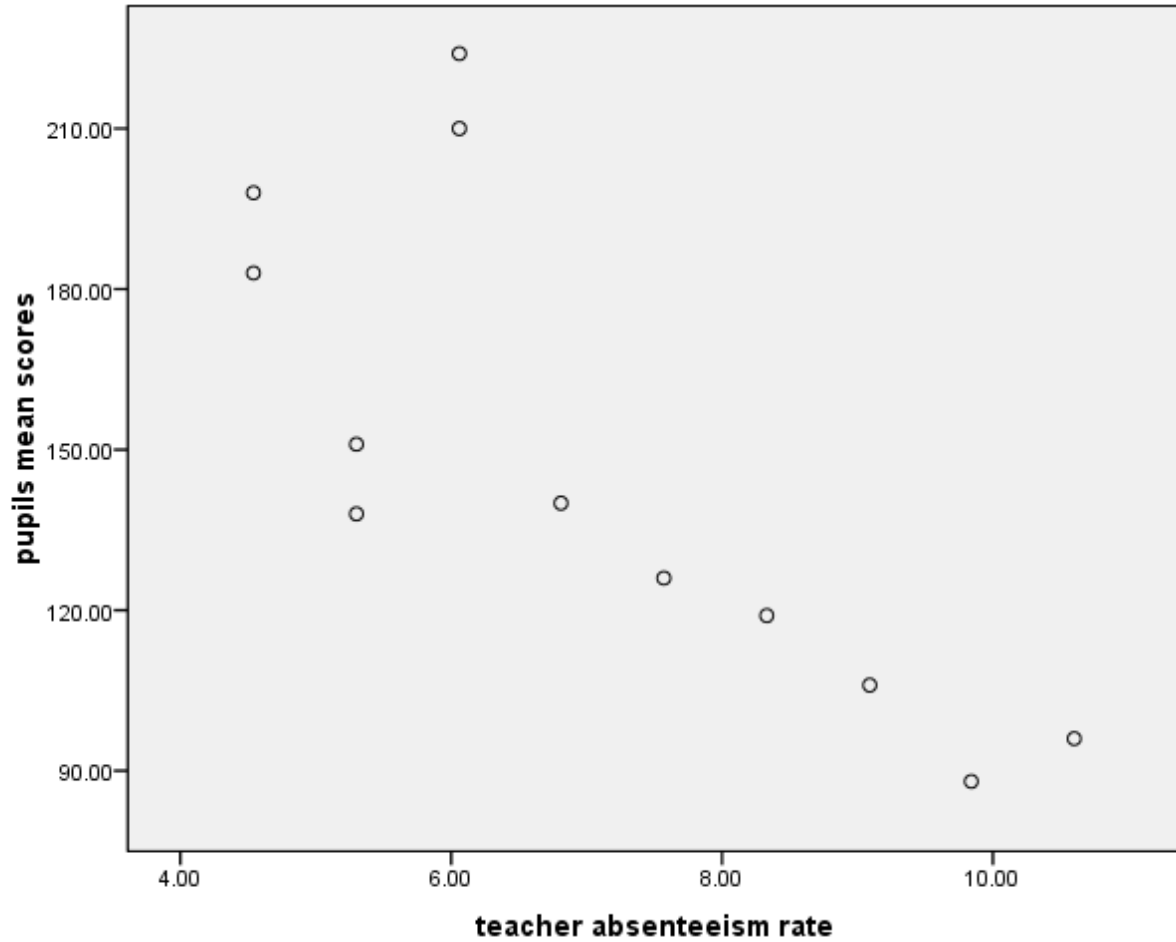
Schools	Pupils’ mean score (%)	Teachers’ absenteeism rate (%)	Class size
1	106	9.09	126
2	126	7.57	74

3	151	5.30	45
4	140	6.81	53
5	198	4.54	46
6	138	5.30	36
7	210	6.06	61
8	88	9.84	138
9	183	4.54	55
10	224	6.06	39
11	96	10.60	102
12	119	8.33	84
Total			859

Source: Field survey, 2024.

4.1.1 The scatterplot of teachers' absenteeism rates and pupils' mean scores.

Before the regression analysis, a scatter diagram was performed and it was ascertained that the data assumed normal distribution and showed a linear relationship between teachers' absenteeism rates and pupils' mean scores. The result for the scatterplot is illustrated in Figure 1. From the scatterplot, the negative relationship between teachers' absenteeism rates and pupils' mean scores is obvious. Therefore, it can be seen that as teachers' absenteeism rates increases, pupils' mean scores decreases from left to right.



Source: Field survey, 2024.

Figure 4.1: the scatterplot of teachers' absenteeism rates and pupils' mean scores.

4.1.2 Simple linear regression analysis of teachers' absenteeism and pupils' performance

In order to establish the relationship between teachers' absenteeism (predictor variables) and pupils' performance (dependent variable), a simple linear regression analysis was conducted and the results are presented in Table 4.1, Table 4.2 and Table 4.3. The results indicated that teachers' absenteeism rates explain 62% of the variations in students' mean scores ($F(1,10) = 16.669$, $R^2 = .625$, $p < .002$) as shown in Table 4.1 and Table 4.2. The overall results showed that the

teachers' absenteeism rate is a significant negative predictor of pupils' examination scores ($\beta = -.791, t = -4.083, p < .002$).

Table 4.1: Model Summary results of the predictor

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.791 ^a	.625	.588	29.30950

a. Predictors: (Constant), teacher absenteeism rate

Source: Field survey, 2024.

Table 4.2: ANOVA results of the predictor model

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14319.785	1	14319.785	16.669	.002 ^a
	Residual	8590.465	10	859.047		
	Total	22910.250	11			

a. Predictors: (Constant), teacher absenteeism rate

b. Dependent Variable: pupils mean scores

Source: Field survey, 2024.



Table 4.3: the results of the Coefficients of the predictor model

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	270.268	31.060		8.701	.000
teacher absenteeism rate	-17.423	4.267	-.791	-4.083	.002

a. Dependent Variable: pupils mean scores

Source: Field survey, 2024.

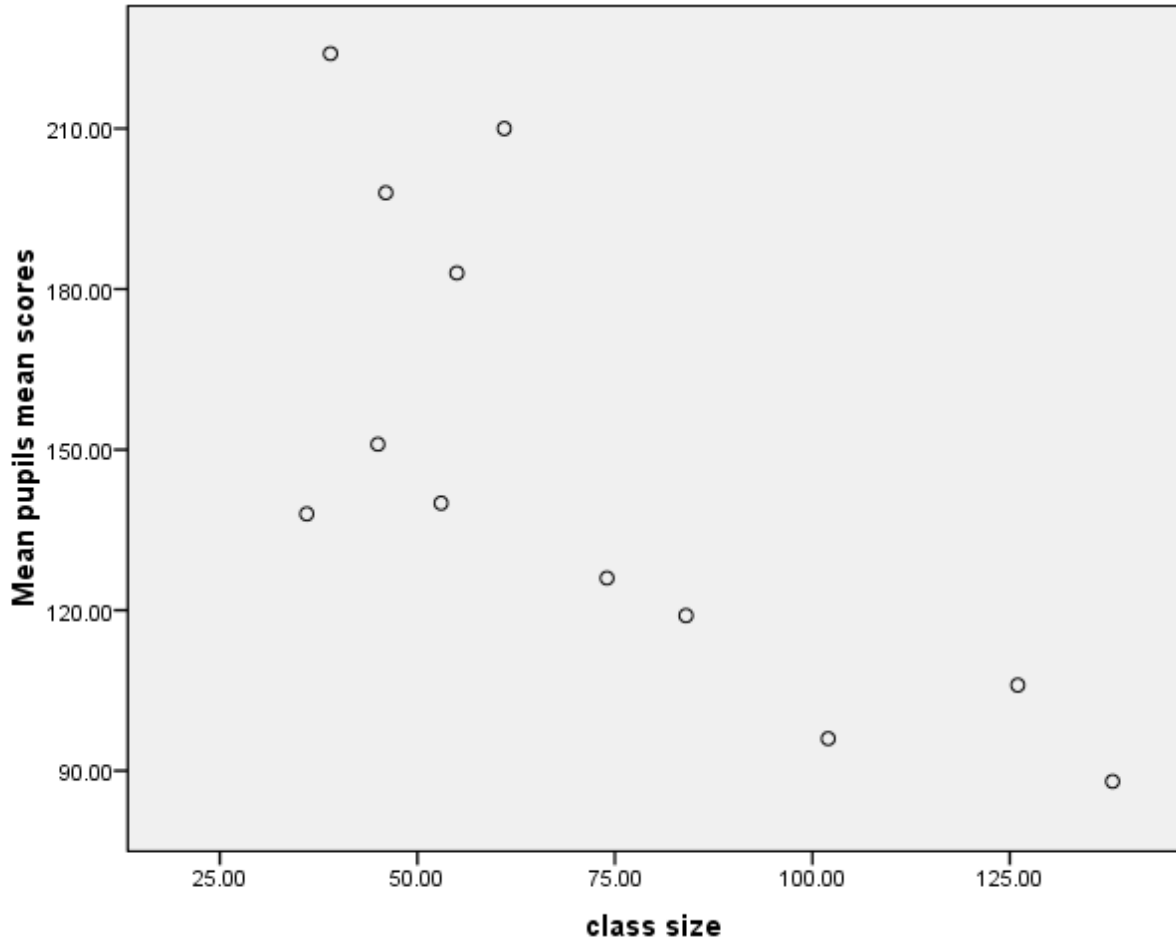
4.2: The impact of class size on pupils' academic achievement

The objective two of this study was to access how class size impacts on pupils' academic performance in basic schools. Therefore, a scatter diagram and simple linear regression was performed to was performed.

4.2.1 The scatterplot of class size and pupils' mean scores.

The scatter plot is demonstrated in Figure 2. According to Figure 2, there is negative relationship between class size and pupils' mean scores. This observation implied that as class size increases, pupils' mean scores decreases, and while pupils' mean scores values are getting bigger, class size values correspond with smaller values.





Source: Field survey, 2024.

Figure 4.2: the scatterplot of class size and pupils' mean scores.

4.2.2 Simple linear regression analysis of class size and pupils' performance

In this study, a simple linear regression analysis was conducted to assess the effect of class size (independent variable) on pupils' mean scores (dependent variable). The results are presented in Table 4.4, Table 4.5 and Table 4.6. The results indicated that class size explain 55% of the variations in students' mean scores ($F(1,10) = 12.631$, $R\text{ Square} = .558$, $p < .005$) as seen in Table 4.1 and Table 4.2. The overall results showed that the class size has a significantly negative effect on pupils' examination scores ($\beta = -.747$, $t = -3.554$, $p < .005$).

Table 4.4: Model Summary results of the linear regression analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.747 ^a	.558	.514	31.81745

a. Predictors: (Constant), class size

Source: Field survey, 2024.

Table 4.5: ANOVA results of the predictor model

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12786.749	1	12786.749	12.631	.005 ^a
	Residual	10123.501	10	1012.350		
	Total	22910.250	11			

a. Predictors: (Constant), class size

b. Dependent Variable: pupils mean scores

Source: Field survey, 2024.



Table 4.6: the results of the Coefficients of the predictor model

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	219.577	22.071		9.948	.000
class size	-.996	.280	-.747	-3.554	.005

a. Dependent Variable: pupils mean scores

Source: Field survey, 2024.

4.3: The causes of poor academic performance of pupils

The third objective was to determine the cause of poor academic performance of pupils in basic. To answer this, qualitative data was gathered through focus group discussions and analyzed using thematic analysis. The analyzed results from the focus group discussions are presented below.

From the focus group discussion, both teachers and students' response to the question "What is the general performance of your school in the past 5 years?", was "our school general performance is low comparing to other schools in the region or the country". According to results, when the pupils were asked "what are the causes of poor academic performance of pupils in your school?", they mentioned "poor school leadership; insufficient teaching and learning materials; low teacher-student engagements; teachers' absenteeism; and poor parental support for their children education". The teachers' responses to the same question were "language pupils speak in school and home; large classroom size; teachers' and pupils' absenteeism; poor parental support for their children education; poor assessment of pupils; and insufficient teaching and learning materials" as



the causes of poor academic performance of pupils in their schools. To the question “are your parents supportive and involve in your education?”, they responded that “our parents don’t want to assist and involve in our school matters though they give us chop money”.

4.4: Strategies to improve academic performance of pupils

The fourth objective was to identify the strategies to improve academic performance of pupils in basic. Also, in this study, qualitative data was gathered from focus group discussions and the analyzed data is presented below. When the pupils were asked “what are the strategies that can improve academic performance of pupils in your school?”, they revealed that “organizing extra-tuition for pupils; encouraging pupils to learn; ensure the availability of teaching and learning materials necessary for learning; demoting worst performing pupils; and ensure that all teachers perform their duty of teaching”. To the question “Is your school working to improve the academic performance of pupils?”, they responded that “our school is not doing anything about our pupils’ performances”.

Similarly, when teachers were asked “what are the strategies that can improve academic performance of pupils in your school?”, they revealed that the strategies that can improve academic performance includes “making sure pupils are discipline and punctual in class; demoting worst performing pupils; organizing extra-tuition for pupils; Involving the parents of worst performing pupils; ensure that all teachers perform their duty of teaching; ensure the availability of teaching and learning materials necessary for learning; and encouraging pupils to learn”. To the question “Do believe the school can improve on the academic performance of pupils in your schools?”, some teachers mentioned that “it is possible and we are adopting strategies like extra-tuition to improve pupils’ academic achievements”.



4.5 Discussion of results

The main purpose of the study is to investigate the effect of school-associated factors on the performance of junior high school pupils in the Tamale Metropolis. Specifically, the current research accessed the relationship between teachers' absenteeism and pupil's academic performance; how class size influences pupils' academic performance in basic schools in Tamale Metropolis; determined the cause of poor academic performance; and identified the strategies adopted to improve academic performance of pupils in basic schools. The findings of the study are presented and discussed with respect to the objectives of the study.

The study found that the overall pupils' performance and teachers' absenteeism rates were both low across the schools sampled and respondents already mentioned that "our school general performance is low comparing to other schools in the region or the country". The results of this study showed a negative linear relationship between teachers' absenteeism rates and pupils' mean scores, as teachers' absenteeism rates increases, pupils' mean scores decreases, and in the way, when pupils' performances increase, teachers' absenteeism rates reduce. Additionally, in this study the results of linear regression analysis indicated that teachers' absenteeism rates explain 62% of the variations in students' mean scores ($F(1,10) = 16.669$, $R\text{ Square} = .625$, $p < .002$), implying that the teachers' absenteeism rate is a significant negative predictor of pupils' examination scores ($\beta = -.791$, $t = -4.083$, $p < .002$). As already reported, Kuusiemeh (2016) study's findings demonstrated that teacher absences result in fewer teaching hours, which makes it difficult for students to complete the required curriculum and, ultimately, results in poor academic achievements. The findings in this study agrees with other previous studies by Bonsu, Adom, Adu-



Agyem, and Adu-Mensah, (2023) in Ejisu Municipality in Ghana and by Moses (2021) in Kwapa sub-country in Uganda.

The relationship between teachers' absenteeism and pupils' academic performance has been explored in various studies, with findings indicating a significant impact. Bayeke et al. (2024) presents a direct correlation, where teacher-student absenteeism factors are shown to have a significant positive impact on academic performance, suggesting that increased absenteeism negatively affects student outcomes. This is supported by the regression models indicating that absenteeism, among other factors, significantly negatively affected the academic performance of secondary school students in Tororo District (Bayeke et al., 2024). Contradictorily, while Bayeke et al. (2024) focuses on absenteeism broadly, including both teachers and students, other studies have concentrated on different aspects of teacher presence and behavior. For instance, Subedi et al. (2024) discusses the broader influence of teachers' behavior on students' academic achievement, implying that not only absenteeism but also other behavioral factors of teachers play a crucial role in shaping academic outcomes. In a similar vein, Afzal et al. (2023) stress the value of the teacher-student bond, which may suffer from teacher absenteeism and thus affect academic achievement. Overall, the research points to a glaringly detrimental correlation between student academic achievement and teacher absenteeism. Since the teacher-student interaction and the continuity of instruction are essential for academic performance, absenteeism has a negative impact on student results (Afzal et al., 2023; Bayeke et al., 2024; Subedi et al., 2024). These results highlight how crucial teacher presence is to the learning process and how it affects student performance.

This study found that the Class sizes across the schools sampled were higher. The results in this study exhibited a negative linear relationship between class size and pupils' mean scores, and as





class size increases, pupils' performance decreases, and when pupils' performances increase, class size decreases. Furthermore, the results of linear regression in this study showed that class size explain 55% of the variations in students' mean scores ($F(1,10) = 12.631$, $R\text{ Square} = .558$, $p < .005$), signifying that the class size has a significant negative effect on pupils' examination scores ($\beta = -.747$, $t = -3.554$, $p < .005$). This result is in agreements with the report by Etim, Etim, and Blizard (2020). In a similar study, McEwan, (2015) showed that pupils learn better in smaller classes and performed better in basic schools than their peers in larger classes. Similarly, Ding and Lehrer, (2011) showed that children who scored higher on tests benefited more from smaller class sizes.

According to the qualitative study, this study uncovered that the cause of poor academic performance of pupils in basic are "poor school leadership; low teacher-student engagements; teachers' and students' absenteeism; poor parental support for their children education; language pupils speak in school and home; large classroom size; poor assessment of pupils; and insufficient teaching and learning materials". This study finding is similar to the work done by Isiko (2019), Banerjee, (2016) and Alami, (2016). The cause of poor academic performance is multifaceted, with studies identifying a range of contributing factors as found in this study. Personal, family, school, teacher, and community factors, as well as multimedia use, have been found to sometimes affect academic performance, though peer factors were not significant in one study (Omaweng, 2022). Other research highlights the negative impact of part-time jobs, dissatisfaction with the subject of study, and negative perceptions of the education system and job market on Cumulative Grade Point Average (CGPA) (Akhter & Rahaman, 2020). Additionally, factors such as financial conditions, family income, social media use, and extra-curricular activities have been shown to influence academic performance (Alam & Khatun, 2021). Interestingly, while some studies suggest that parental concern, time spent on social media, and teaching style are significant (Saeed



et al., 2020), others find no relationship between academic performance and factors like current employment status or socioeconomic status, at least among evening students (Rossi, 2017). Poor teaching strategies, a lack of compositional teaching expertise, and negative attitudes were found to be factors in low performance in the context of producing English compositions (Phiri et al., 2023). Institutional elements like infrastructure and teaching resources also matter, with the way lectures are delivered having a big impact (Santos & Celis, 2020). Overall, a complex interaction of personal, family, institutional, and socioeconomic factors contributes to subpar academic performance. Parental engagement, instructional strategies, socioeconomic circumstances, work status, and contentment with the topic of study are a few examples, but there are many. A comprehensive strategy that takes into account the variety of difficulties kids encounter is needed to address these factors (Akhter & Rahaman, 2020; Alam & Khatun, 2021; Omaweng, 2022; Phiri et al., 2023; Rossi, 2017; Saeed et al., 2020; Santos & Celis, 2020).

Finally, teachers and students in this study reported that "arranging extra-tuition for pupils; ensuring pupils are discipline and punctual in class; demoting worst performing pupils; involving the parents of worst performing pupils; ensuring that all teachers fulfill their duty of teaching; ensuring the availability of teaching and learning materials necessary for learning; and encouraging pupils to learn" are some strategies that can improve students' academic performance. This study finding is in agreement with previous studies who also reported similar findings such as the work done by Maina, (2010) and Polirstok, (2017). Other strategies identified across the studies to improve academic performance include the The use of ARCS-based instruction to increase motivation and academic performance (Subbiah, 2024), the integration of artificial intelligence tools to tailor educational approaches (Bressane et al., 2023), the improvement of learning strategies like microstrategies, keys of memory, and metacognition (Ali & Saif, 2023),

the application of learning and study strategies to improve academic achievement (Nosheen & Hussain, 2020), the emphasis on learning strategies like effort, attention, and learning environment over general cognitive ability (Ruffing et al., 2015), the creation of teaching methods that boost learning motivation and commitment (Kang & Park, 2021), and the training of executive functions to facilitate learning-related behaviors and cognitions (Gunzenhauser & Nückles, 2021). It's interesting to note that while some studies concentrate on the direct application of particular learning strategies or the improvement of motivation and commitment, others suggest more systemic approaches, like training executive functions to achieve far transfer to academic performance (Gunzenhauser & Nückles, 2021) or using AI for personalized learning interventions (Bressane et al., 2023). Overall, there is a wide range of methods to raise academic achievement, from systemic interventions like AI-based decision support systems and executive function training to personalized learning strategies and motivational tactics. These tactics highlight the necessity of an all-encompassing approach to education that takes into account each student's particular requirements and cognitive characteristics in order to improve their educational experiences and academic performance.



CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0: INTRODUCTION

The current chapter is the last section of this study and it presents the summary of findings, conclusion and recommendations of this study.

5.1: SUMMARY OF FINDINGS

The main purpose of the study was to investigate the effect of school-associated factors on the performance of junior high school pupils in the Tamale Metropolis. Specifically, the research accessed the relationship between teachers' absenteeism and pupil's academic performance; how class size influences pupils' academic performance in basic schools in Tamale Metropolis; determined the cause of poor academic performance; and identified the strategies adopted to improve academic performance of pupils in basic schools. The findings of the study are presented according to the objectives of the study.

The study found that the overall pupils' performance and teachers' absenteeism rates were both low across the schools sampled. Additionally, in this study the results of linear regression analysis indicated that teachers' absenteeism rates explain 62% of the variations in students' mean scores ($F(1,10) = 16.669$, $R\text{ Square} = .625$, $p < .002$), implying that the teachers' absenteeism rate is a significant negative predictor of pupils' examination scores ($\beta = -.791$, $t = -4.083$, $p < .002$).

Moreover, this study found that the Class sizes across the schools sampled were larger. Also, the results of linear regression in this study showed that class size explain 55% of the variations in



students' mean scores ($F(1,10) = 12.631$, $R^2 = .558$, $p < .005$), signifying that the class size has a significantly negative effect on pupils' examination scores ($\beta = -.747$, $t = -3.554$, $p < .005$).

According to the qualitative study, this study uncovered that the cause of poor academic performance of pupils in basic schools are “poor school leadership; low teacher-student engagements; teachers' and students' absenteeism; poor parental support for their children education; language pupils speak in school and home; large classroom size; poor assessment of pupils; and insufficient teaching and learning materials”.

Finally, this study revealed that strategies that can improve academic performance of pupils include organizing extra-tuition for pupils; ensure pupils are discipline and punctual in class; demoting worst performing pupils; involving the parents of worst performing pupils; ensure that all teachers perform their duty of teaching; ensure the availability of teaching and learning materials necessary for learning; and encouraging pupils to learn”.

5.2: CONCLUSION

This study investigated the effect of school-associated factors on the performance of junior high school pupils in the Tamale Metropolis. The study used an explanatory sequential mixed method design along with pragmatism as the research philosophy. This study employed a multi-stage sampling process and 12 schools were selected using random sampling. The study sampled 12 headteachers, 859 final year pupils, and 36 final year teachers using purposive sampling to make a total of 907 participants. Data on pupils' academic performance, class size, and teachers' absenteeism were obtained from school records followed by focused group discussions.

The quantitative data were analysed using descriptive and inferential statistics. Simple linear regressions analysis was done to measure association and effect between teachers' absenteeism



rates and class sizes as independent variables and pupils' performances as dependent variable. The qualitative data from the focus group discussions were analysed using thematic analysis.

The study found that the overall pupils' performance and teachers' absenteeism rates were both low and the class sizes were larger across the schools sampled. Additionally, in this study the results of linear regression analysis indicated that teachers' absenteeism rates explain 62% of the variations in students' mean scores ($F(1,10) = 16.669$, $R^2 = .625$, $p < .002$), implying that the teachers' absenteeism rate is a significant negative predictor of pupils' examination scores ($\beta = -.791$, $t = -4.083$, $p < .002$).

Also, other results of linear regression in this study showed that class size explain 55% of the variations in students' mean scores ($F(1,10) = 12.631$, $R^2 = .558$, $p < .005$), signifying that the class size has a significantly negative effect on pupils' examination scores ($\beta = -.747$, $t = -3.554$, $p < .005$).

According to the qualitative study, this study uncovered that the cause of poor academic performance of pupils in basic schools are "poor school leadership; low teacher-student engagements; teachers' and students' absenteeism; poor parental support for their children education; language pupils speak in school and home; large classroom size; poor assessment of pupils; and insufficient teaching and learning materials".

Finally, this study revealed that strategies that can improve academic performance of pupils include organizing extra-tuition for pupils; ensure pupils are discipline and punctual in class; demoting worst performing pupils; involving the parents of worst performing pupils; ensure that



all teachers perform their duty of teaching; ensure the availability of teaching and learning materials necessary for learning; and encouraging pupils to learn”.

This study concludes that teachers’ absenteeism and class size have both significantly negative effect on pupils’ examination scores, hence schools’ management should implement strategies to nullify these effects to improve academic performances of pupils.

5.3: RECOMMENDATIONS

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

This study showed that teachers’ absenteeism and class size have significantly negative effect on pupils’ examination scores, therefore the Government, district assembly and the school administration should collaborate to construct new infrastructure or rehabilitate abandoned facilities to add sufficient classrooms in order to reduce large class sizes and improve teaching and learning.

Also, the Metro education office, parents and the school administration should increase monitoring and implement strategies to reduce teachers’ and students’ absenteeism so as to increase contact-hours and enhance the performance of pupils.

Additionally, the government, district assembly and school administration should provide or allocate funds for the regular provisions of sufficient teaching-learning materials in the schools. These provisions would encourage effective teaching and learning in the schools.

This study found practical strategies that can improve academic performance of pupils, the metro education office, parents and the school administration should implement these strategies improve the performance of pupils in the schools.



5.6 RECOMMENDATIONS FOR FURTHER RESEARCH

- ☐ Further studies should consider a large and broad study on the region or the country that would yield a broader picture instead of only one metro pollutant.
- ☐ Similarly, further study on how student and teacher absenteeism affect pupils' performance or the teaching and learning activities in the schools will equally provide valuable information.



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APPENDIX 1

A GUIDE FOR GROUP DISCUSSION

Part I: General information of respondents

1. Age in years

- a. 12-25
- b. 26-39
- c. 40 or older

2. Sex

- a. Male

- b. Female

3. Religion

- a. Christian
- b. Islam
- c. Traditionalist

Part II: Questions for focus group discussion

1. What is the general performance of your school in the past 5 years?
2. Are your parents supportive and involve in your education?
3. What are the causes of poor academic performance in your school?
4. Do believe the school can improve on the academic performance of pupils in your schools?
5. Is your school working to improve the academic performance of pupils?
6. what strategies are adopted to improve academic performance of pupils in your schools?

