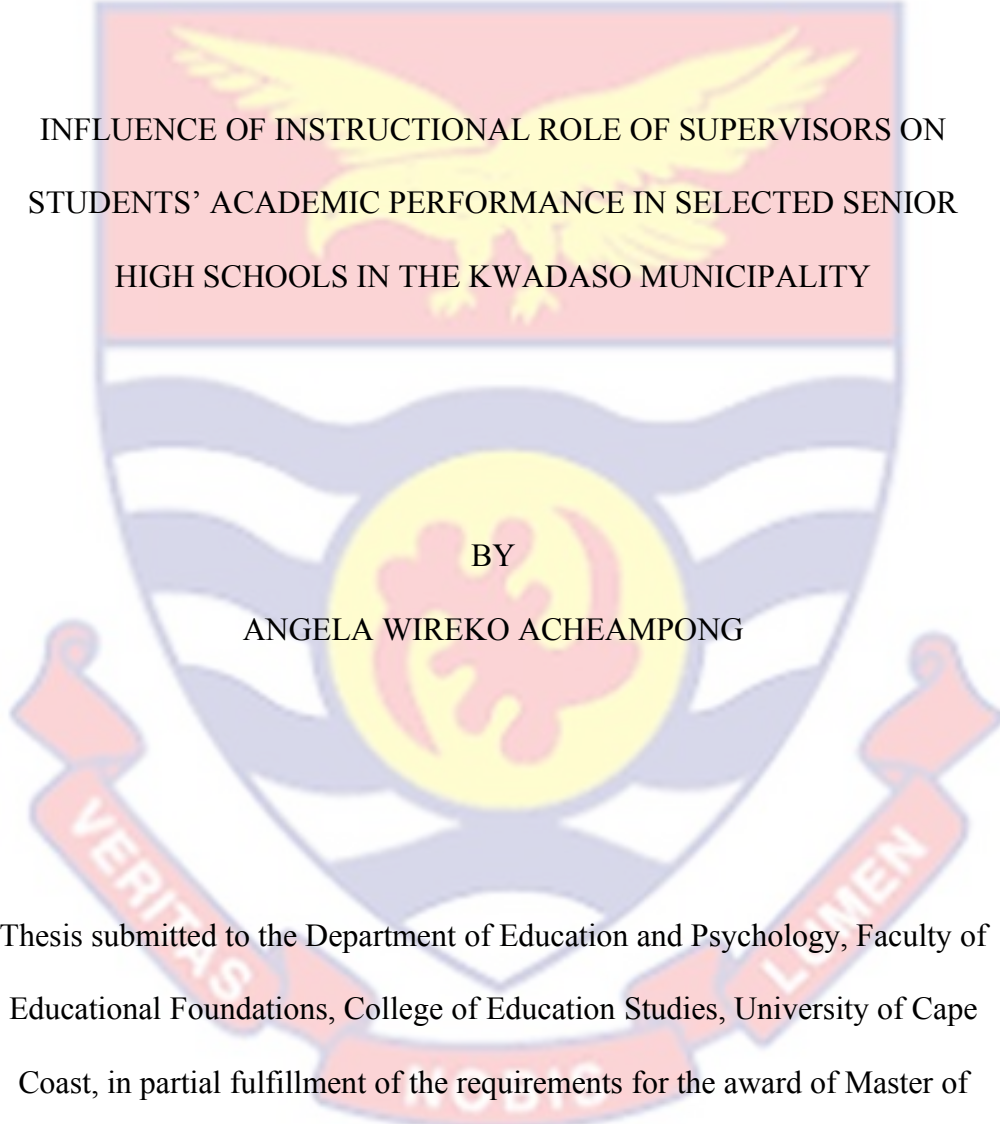


UNIVERSITY OF CAPE COAST



INFLUENCE OF INSTRUCTIONAL ROLE OF SUPERVISORS ON
STUDENTS' ACADEMIC PERFORMANCE IN SELECTED SENIOR
HIGH SCHOOLS IN THE KWADASO MUNICIPALITY

BY
ANGELA WIREKO ACHEAMPONG

Thesis submitted to the Department of Education and Psychology, Faculty of
Educational Foundations, College of Education Studies, University of Cape
Coast, in partial fulfillment of the requirements for the award of Master of
Philosophy degree in Educational Psychology

DECEMBER 2021

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature Date

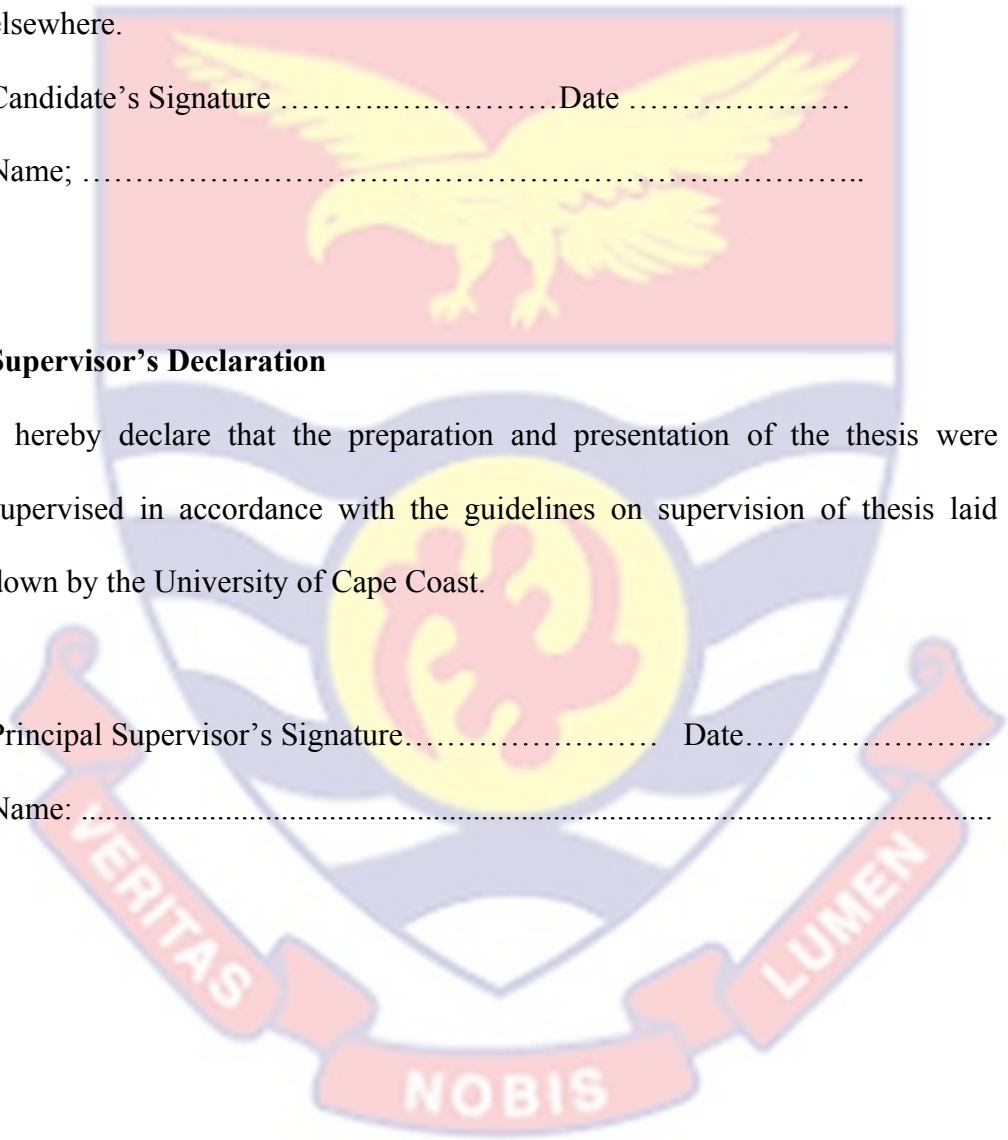
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Supervisor's Declaration

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature..... Date.....

Name:



ABSTRACT

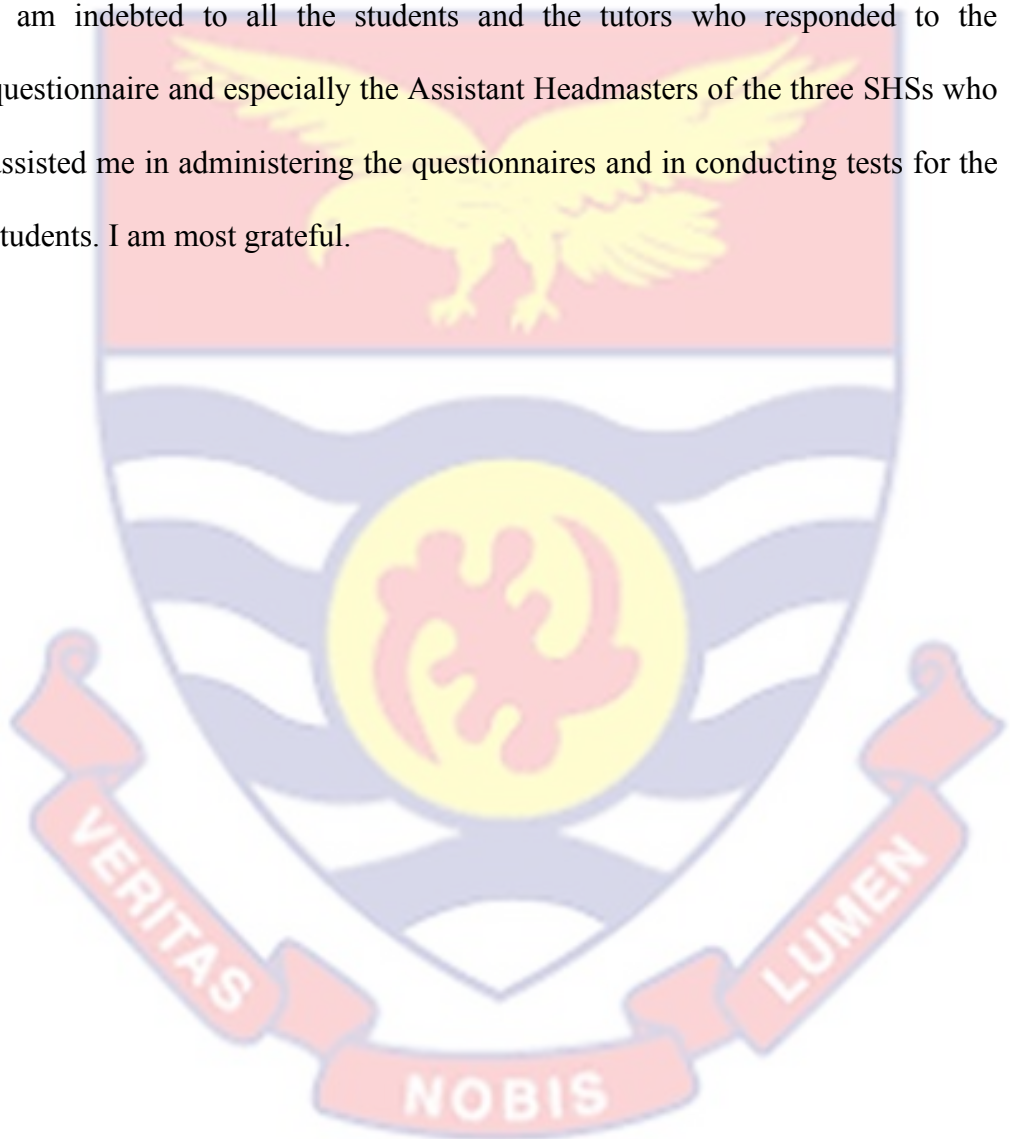
The study focused on assessing the influence of instructional supervision on students' academic performance in selected Senior High Schools (SHS) in the Kwadaso municipality in Ashanti Region. Descriptive survey research design was adopted for this study. A sample of 603 respondents made up of 236 staff and 367 students were drawn from the population for the study. Questionnaire and tests were the main primary data collection instrument used to gather data for this study. These respondents were sampled using stratified random, purposive and systematic sampling methods. The data gathered were analysed using descriptive statistical tools, multiple linear regression, mean and standard deviation, ANOVA and independent sample t-test. The study found instructional supervision to have a positive statistically significant influence on students' performance in all the four core subjects in the selected SHS. Lastly, the study revealed that developmental instructional supervision best predicts students' academic performance. It was recommended among other things that management leadership and heads of second cycle institutions must be particularly attentive to the instructional supervision styles used in the institutions because they have serious implication for students' academic performance.

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I am most grateful to God Almighty for empowering me to do this work and carrying me through the years for this programme.

I owe a deep gratitude to Dr. Felix Senyamator for the supervision, guidance, advice, encouragement and the goodwill with which he guided this work.

I am indebted to all the students and the tutors who responded to the questionnaire and especially the Assistant Headmasters of the three SHSs who assisted me in administering the questionnaires and in conducting tests for the students. I am most grateful.



DEDICATION

To my children, my dear husband and to my entire family.



TABLE OF CONTENTS

	Page
DECLARATION	ii
ABSTRACT	iii
ACKNOWLEDGEMENTS	vi
DEDICATION	vii
TABLE OF CONTENTS	viii
LIST OF TABLES	x
LIST OF FIGURES	
CHAPTER ONE: INTRODUCTION	1
Background to the Study	1
Statement of the Problem	6
Purpose of the Study	9
Research Questions	10
Hypothesis	10
Significance of the study	11
Delimitation of the Study	11
Limitation of the Study	12
Organisation of the Study	12
CHAPTER TWO: LITERATURE REVIEW	13
Introduction	13
Theoretical Framework	13
Theory of Clinical Instructional Supervision	13
Theory of Developmental Supervision	21
Theory of Collegial Instructional Supervision	23

Conceptual Framework of the Study	25
The Concept of Instructional Supervision	26
Styles of Instructional Supervision	30
Collaborative Instructional Supervisory Style	31
Developmental Supervision Style	33
Procedure for Instructional Supervision	34
Components of Effective Instructional Supervision	35
The Definition and Concept of Students' Academic Performance	41
Determinants of Students Academic Performance	43
Indicators of Students' Academic Performance	46
Empirical Review	47
Instructional Supervision Styles Used in Schools	47
Challenges of Instructional Supervision	48
Summary and Conclusion of the Review	58
CHAPTER THREE: RESEARCH METHODOLOGY	59
Introduction	59
Research Design	59
Study Area	60
Population of the Study	61
Sampling Procedure	62
Research Instruments	65
Pre-testing of Questionnaire	67

Validity and Reliability of data	67
Procedure for Data Collection	69
Data Analysis Procedure	70
CHAPTER FOUR: RESULTS AND DISCUSSION	72
Introduction	72
Response Rate to the Questionnaire	72
Demographic Characteristics of Respondents	72
Analysis of the Main Data	78
Discussions of the Results	101
Summary	107
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	AND
Introduction	108
Summary	108
Overview	108
Key Findings	109
Conclusions	112
Recommendations	113
Suggestions for Further Study	115
REFERENCES	120
APPENDICES	
Appendix A: Questionnaire for Supervisory Staff	134
Appendix B: Questionnaire for Teachers	137
Appendix C: English Language Test	139
Appendix D: Mathematics (Core)	144
Appendix E: Science (Core) Test	147



LIST OF TABLES

Table	Page
1. Students' Academic Performance in WASSCE for 2015--2017	8
2. Population Distribution Among the three Selected SHSs	61
3. Sample Size Distribution of Staff the Selected SHSs	63
4. Sample Size Distribution of the Students Across the SHSs	64
5. Summary of Sample Size	65
6. Demographic Characteristics of Teachers	73
7. Demographic Characteristics of Supervisors	75
8. Teachers' knowledge of Instructional Supervision Styles	79
9. Supervisors' knowledge of Instructional Supervision Styles	80
10. Clinical Supervision Usage in the Selected SHS (Teachers' Responses)	81
11. Collegial Supervision Usage in the Selected SHS (Teachers' Responses)	83
12. Developmental Supervision Usage in the Selected SHS (Teachers' Responses)	84
13. Clinical Supervision Usage in the Selected SHS (Supervisors' Responses)	86
14. Collegial Supervision Usage in the Selected SHS (Supervisors' Responses)	87
15. Developmental Supervision Usage in the Selected SHS (Supervisors' Responses)	88
16. The Most Used Style of Instructional Supervision	89

17.	Challenges Associated with Implementation of Instructional Instructional Supervision	91
18.	Influence of Instructional Supervision on Practices on Students Performance in English Language Subject	93
19.	Influence of Instructional Supervision on Practices on Students Performance in Core Mathematics	94
20.	Influence of Instructional Supervision on Practices on Students Performance in Core Science Subject	95
21.	Influence of Instructional Supervision on Practices on Students Performance in Social Studies Subject	97
22.	Influence of Instructional Supervision on Styles on Students Performance	98
23.	Influence of Instructional Supervision on Practices on Students Performance	99
24.	Model Summary for the Three Instructional Supervision Styles	110
25.	ANOVA Test of Students' Performance Across the three Schools	112
26.	Tukey's Post-hock Analysis of Students' Performance	112
27.	Gender Difference in Academic Performance with	113

LIST OF FIGURES

Figure	Page
Conceptual Model of the Study	25



CHAPTER ONE

INTRODUCTION

Background of the Study

Formal education is globally considered to be one of the vital fields for facilitating socio-political and economic growth and development of any nation. One of the principal indicators of a country's development is its citizenry level of formal education (UNESCO, 2008). Worldwide, formal education is viewed as a fundamental human right of people and should be made accessibly free at the elementary level as formally expressed in the Universal Declaration of Human Rights Charter of 1948 (UNESCO, 2008). The primary agendum of the formal educational system of a nation, according to Bossey and Chan (2012), focuses on equipping the populace to help build the society in order to eradicate social and economic inequality.

Broadly, formal education, usually referred to as education across the world has three tiers; basic, secondary/high school and tertiary. The quality of basic level of formal education is strictly indispensable in defining the quality of students' educational outcome in the subsequent levels (Poirier, 2009). In the light of this, secondary level of education is viewed as the most significant transitional zone of the education process to address national developmental issues in terms of human capital development. This is so because secondary education serves as a critical nexus between the basic tier and the tertiary level or career development stage, and later to the world of work (Bray, 2008). Again, the quality of secondary education provided by a nation offers

individuals with diverse advantages for further educational advancement, greater prospects for career success, and for socio-economic development of that nation (Bessong & Felix, 2009). It is for this and many other reasons that across the world, governments and more especially, the developing countries' governments keep investing so much in education, particularly, in secondary education (Segun, 2004).

In Ghana, secondary education has received particular attention from the government in respect of financing in recent years. The government of Ghana in September, 2017 introduced free secondary education with the view to removing cost barrier and enhancing students' access to secondary education. This goes to show how dear secondary education is to the government of Ghana (Nurudeen, Abdul, Wan, & Abdul-Rah, 2018). In the face of this monumental intervention by the government in secondary education provision, the issue that arises is the quality level of secondary education in Ghana (Nurudeen et. al, 2018). The quality of education provided in a nation at all levels is the result of the interplay of several factors and notable among them are teachers' commitment, proper supervision of teaching and learning, provision of educational infrastructure, and teaching and learning materials among others (Archibong, 2010).

What is more, effective provision of quality secondary education demands a robust and a trustworthy system of education. The trustworthiness of the educational system is attained via various forms of supervisions by heads of educational institutions (Abdille, 2012). Supervision in the context of education has two legs—instructional supervision and personnel supervision (Achibong, 2010). Charles, Christ and Kosgei (2012) explained instructional

supervision as a chain of activities performed, having the objective of making better for the learner the rationale for teaching and learning. The writers further indicated that personnel supervision, on the other hand, captures a chain of actions carried out by a superior primarily to address the challenges and deficiencies of the teaching staff, whilst motivating them to carry out their instructional responsibilities efficiently to achieve the defined objectives of the educational framework (Charles et. al, 2012). This study however focuses on instructional supervision and its relationship with students' performance.

In the light of the foregoing discourse, it is quite clear that the success in the provision of quality education, more particularly, at the pre-tertiary level depends, to a greater extent, on prioritization of instructional supervision (Archibog, 2013). That is to say supervision is considered as one of the major factors that contribute to the effective delivery of quality education. Thus, in a school setting where teaching and learning takes place, effective supervision plays a very crucial role in ensuring quality education by improving students' academic performance. According to Segun (2004), the importance of school supervision in today's educational system is increasingly gaining attention.

Lately, people are becoming more aware than in the past about the importance of education and they are getting much more interested in participating in school systems to ensure the achievement of the school instructional content (Lyons, 2010). Supervision, as defined by Manas (2012), is a co-ordination by someone taking responsibility for the work of others including planning, scheduling, allocating, instructing and monitoring actions. The concept of instructional supervision has emerged in recent time as a much more ready tool used by stakeholders of education to get involved in the

education process for the improvement of teaching and learning in schools (Reeves, 2012).

To proceed in giving diverse perspectives of how instructional supervision has been defined, it is important to distinguish between instructional supervision and school inspection, the two common terms often used interchangeably in this regard (Blasé & Blasé, 2014). Instructional supervision differs from school inspection in the sense that the former focuses on guidance, support, and continuous assessment provided to teachers for their professional development and improvement in the teaching-learning process, whereas the latter gives emphasis on controlling and evaluating the improvement of schools based on stated standards set by external agents outside the school system (Tyagi, 2010; Blasé & Blasé, 2014). Instructional supervision is mainly concerned with improving schools by helping teachers to reflect on their practices, to learn more about what they do and why, and to develop professionally (Sergiovanni & Starratt, 2007).

Instructional supervision entails the process by which teaching and learning are overseen in the school setting for the purpose of helping teachers to meet the broad instructional objectives set by the education system in order that learners obtain optimal benefits from classroom activities (Lezotte, 2010). School management, heads of educational institutions and department heads of education are entrusted with such task of supervising instructions in schools. Brown and Bourne (2009) saw instructional supervision as pertaining to supervisors' activities geared towards bolstering teacher's professional growth, curriculum improvement and the enhancement of classroom teaching techniques via friendly interaction between the supervisor and the teacher in a

democratic manner. Chapman (2011) asserts that contemporary definitions of instructional supervision has shifted sharply from dwelling on the teacher alone. The author explained that present day instructional supervision has the basic aim of improving on teaching and learning experienced in the school to the mutual advantage of the students and the teacher. Again, instructional supervision has the aim of identifying and addressing the shortcoming of the teachers, and also motivating them to improve on their strength (Chapman, 2011).

Within the pre-tertiary educational system, instructional supervision assumes a vital position such that it is receiving a special attention from educational stakeholders. Instructional supervision is viewed as a process by which teachers' professional growth is enhanced, curriculum is improved and teachers' instructional techniques in class is boosted (Okendu, 2012). According to Nakpodia (2006), in the contemporary educational setting, instructional supervision focuses on how teaching and learning can be improved for the mutual benefit of teachers and students. Essentially, instructional supervision paves the way for teachers' strength and weaknesses to be identified and the needed remedial measures are taken to address the weaknesses. Meanwhile the teachers' efforts are recognised in the process through the instructional supervision and this helps to engender working cordiality between the teachers and their supervisors (Archibong, 2010). Instructional supervision affords the opportunity for doing a careful assessment of the teachers' instructional processes in the class. This enables teachers to be assisted to develop professionally on the job (Sule, 2013).

On the other hand, Okendu (2012) argued that instructional supervision does not only help teachers to improve pedagogically but also facilitates students' learning process by boosting their academic achievements. In the view of Sule (2013), when teachers' instructional activities in the classroom are overseen to ensure their quality, students ultimately become the beneficial recipients of such quality pedagogy. Eerweil, Groff and Haas (2012) mentioned that the present-day instructional supervision pays attention to what the teachers do in the classroom and how that translates into positive learning outcome from the students. Modern instructional supervision practices also encapsulate the process by which supervisors ascertain teachers' classroom engagement with the students and check students' academic exercises against teachers' lesson plans or schemes of work (Eerweil et al., 2012). These processes are followed through to ensure that the instructional supervision process does not only improve on the teachers' professional growth but also spruce up the academic outcome of the students' learning endeavour (Elacqua, 2016).

Evidently, instructional supervision plays a crucial role in quality secondary education provision. In Ghana, the quality level of senior high education has been called into question by some education watchers since the introduction of the Free Senior High School by the government of Ghana in September, 2017 (Abdul, Wan, Ahmed & Salma, 2018). By speculation the high level of enrollment recorded in the school can potentially compromise the expected quality of the students' education (Abdul et al., 2018). While several factors have been found by empirical research to influence quality of education in general, supervision of instruction in the Senior High Schools

(SHSs) is believed to play a critical role in determining the quality of secondary education outcome (Akyeampong, 2016). Despite the relevant role played by instructional supervision in driving secondary educational quality, it appears that not much research work has been done especially in the Ashanti region of Ghana. It is for this reason that this research is carried out to assess how instructional supervision influences students' academic performance in the Senior High Schools in the Ashanti region, focusing on some selected Senior High Schools (SHSs) in Kwadaso Municipality as the study area.

Statement of the Problem

In academic institutions, supervision is a key administrative tool for achieving the desired results and improve academic performance of students. Poor supervision is said to be a serious challenge hampering the expected quality academic outcome in public pre-tertiary schools in Ghana (Ankomah-Sey & Maina 2016). Birago (2015) revealed that basic schools' teachers' absenteeism and misuse of instruction hours for private engagements is a central factor that accounted for the poor standard of education in the public basic schools in Ghana. Akyeampong (2016) also pointed out that the root cause of these undesirable behaviours of some public pre-tertiary school teachers could be attributed to poor teacher supervision by the superiors, and this negatively affects the achievement of policy objectives of education at all levels in Ghana.

Notwithstanding the importance of instructional supervision, not all schools are able to implement it successfully, especially in the Senior High Schools where almost all the teachers are considered masters of their subjects and therefore do not need any serious instructional supervision to be effective

(Ko, Sammons & Bakkum, 2013). Speculation by some pre-tertiary educational stakeholders indicates that poor supervision in public senior high schools has a partial connection with the decline in performance of the students in their West African Senior Secondary School Certificate Examination (WASSCE) (Ankoma-Sey & Maina, 2016). For instance, table 1 presents a three-year performance trend of Yaa Asantewaa Senior High School, Prempeh College and Assemblies of God Senior High School in Kwadaso Municipality indicates a decline in the performance of the students over the period (Students Performance Analysis Sheet of YAGSS, Prempeh College & AGSHS, 2017).

Table 1: *Students Academic Performance in WASSCE for 2015–2017*

Year	2015		2016		2017	
School	Candidates Presented	Candidates Passed	Candidates Presented	Candidates Passed	Candidates Presented	Candidates Passed
Yaa Asantewaa Girls SHS	412	412 (100%)	573	431 (75.3%)	665	490 (73.7%)
Prempeh College	603	603 (100%)	781	659 (84.4%)	846	692 (81.9%)
Assemblies of God SHS	417	285 (68.3)	451	282 (62.6%)	376	227 (60.5%)

Source: Students Performance Analysis Sheet (YAGS, Prempeh & AGSHS)

In effect, Birago (2015) observes that leadership of most public Senior High Schools in Ashanti region of Ghana has not been able to establish effective mechanism to supervise instructions, leading to low performance of

the students in some schools. From the foregoing, it appears that instructional supervision plays a crucial role in driving the academic performance of students in Ghana, little research attention however has been devoted in this area. For example, Tinab (2014) looked at the effect of education supervision on students' academic performance in Nadowli District in the Upper West region of Ghana. However, his study did not consider instructional supervision specifically and the study was also limited to basic schools. Again, Anderson and Donkor (2016) looked at supervision in basic schools. However, their study very much focused on basic education and also government's commitment towards ensuring supervision in basic schools. Sackey et al., (2016) cited in Ankomah-Sey and Maina (2016) rather examine the role of discipline in SHS in influencing students' performance. Similarly, Ankomah-Sey and Maina (2016) assess the influence of instructional supervision on students' performance in Ghana. Their study however considered some aspects of only one approach of instructional supervision—collegial supervision. Thus, Ankomah-Sey and Maina (2016) did not look at clinical and developmental instructional supervisions and how they relate with students' academic performance in SHSs. This study intended to fill this research gap by assessing how instructional supervision (in the context of clinical, developmental and collegial styles) influence the academic performance of the students in Senior High Schools in Ashanti region. This study used some selected senior high schools in the Kwadaso municipality as the study area.

Purpose of the Study

The study generally attempted to assess the influence of instructional supervision on students' academic performance in selected SHSs in Kwadaso Municipality.

The study specifically sought to:

1. Examine the style of instructional supervision used in the selected SHSs in the Kwadaso Municipality
2. Assess which of the instructional supervision styles is most used in the selected SHSs in Kwadaso Municipality
3. Discover the challenges associated with implementing such instructional supervision if any in the selected SHSs in the Kwadaso Municipality.
4. Examine the influence instructional supervision practices have on the students' academic performance in the selected SHSs in the Kwadaso Municipality.
5. Determine which of the instructional supervision styles best predicts students' academic performance in the selected SHSs in Kwadaso Municipality.

Research Question

The following research questions were formulated to guide the study:

1. Which style of instructional supervision is applied in the selected SHSs in the Kwadaso Municipality?

2. Which of the instructional supervision styles is most used in the selected SHSs in Kwadaso Municipality?
3. What are the challenges associated with instructional supervision in the selected SHSs in the Kwadaso Municipality?
4. What is the influence of instructional supervision styles on students' academic performance in the selected SHS in the Kwadaso Municipality?
5. Which of the instructional supervision styles best predicts students' academic performance in the selected SHSs in Kwadaso Municipality?

Hypotheses

H₀ There is no statistically significant difference in the level of students' academic performance in end of semester examinations in the selected Senior High Schools in Kwadaso Municipality.

Alternative

H₁ There is statistically significant difference in the level of students' academic performance in end of semester examinations in the selected Senior High Schools in the Kwadaso Municipality.

H₀ There is no statistically significant gender difference with respect to the influence of instructional supervision styles on students' academic performance in the three selected Senior High Schools in the Kwadaso Municipality.

Alternative

H₁ There is statistically significant gender difference with respect to the influence of instructional supervision styles on students' academic

performance in the three selected Senior High Schools in the Kwadaso Municipality.

Significance of the Study

The study sheds light on the style of the instructional supervisory mechanisms in place at the selected Senior High Schools in the Kwadaso Municipality of Ghana. The outcome of this study is hoped to help both the institutional leadership and the Ghana Education Service to enact policies and procedures for instructional supervision in Senior High Schools within the Kwadaso Municipality. The results from the study would also serve as a guide for instructional supervisors in the Senior High Schools in the Kwadaso Municipality.

Furthermore, studies of this type can create awareness among individuals and beneficiaries of the instructional supervision about the current developments in the education profession, and how it helps to promote teaching and learning. The study would add to knowledge and serve as a source of literature for future researches on the phenomenon of instructional supervision.

Delimitation of the Study

The purpose of the study here as specific boundaries of this research was delimited to assessing the influence of instructional supervision on students' academic performance in Senior High Schools. Subject matter delimitation of this study was to examine the influence of instructional supervision on students' academic performance. Specifically, this study sought to find out the style of instructional supervision used in the selected SHSs in

the Kwadaso Municipality; find out which of the instructional supervision styles is most used in the selected SHSs in Kwadaso Municipality; discover the challenges associated with implementing such instructional supervision if any in the selected SHSs in the Kwadaso Municipality; find out the influence instructional supervision practices have on the students' academic performance in the selected SHSs in the Kwadaso Municipality and; determine which of the instructional supervision styles best predicts students' academic performance in the selected SHSs in Kwadaso Municipality. Geographically, the study was delimited to three Senior High Schools in the Kwadaso Municipality. Institutionally, the study is confined to three senior high schools in Kwadaso municipality, namely, Yaa Asantewaa Girls Senior High School, Assemblies of God Senior High School and Prempeh College.

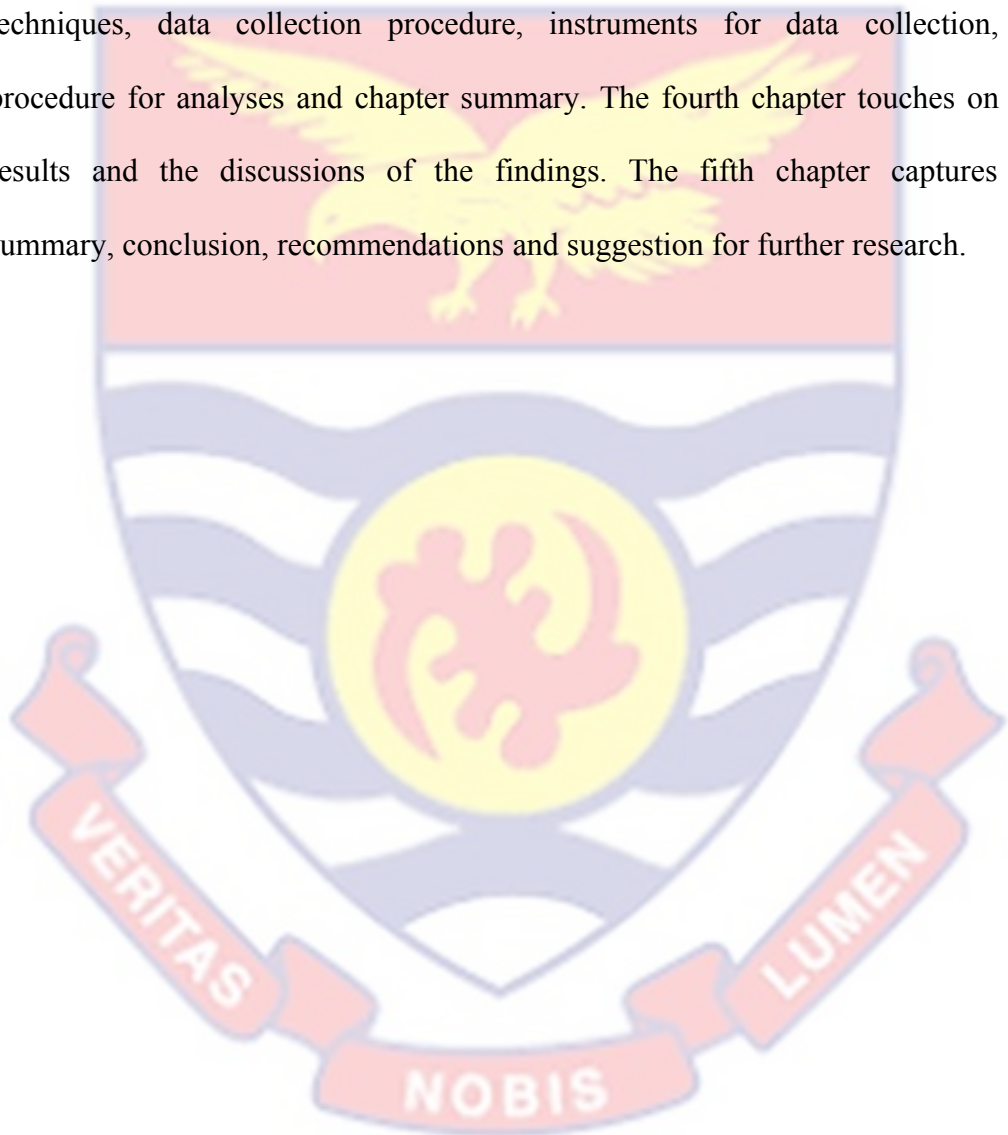
Limitation of the Study

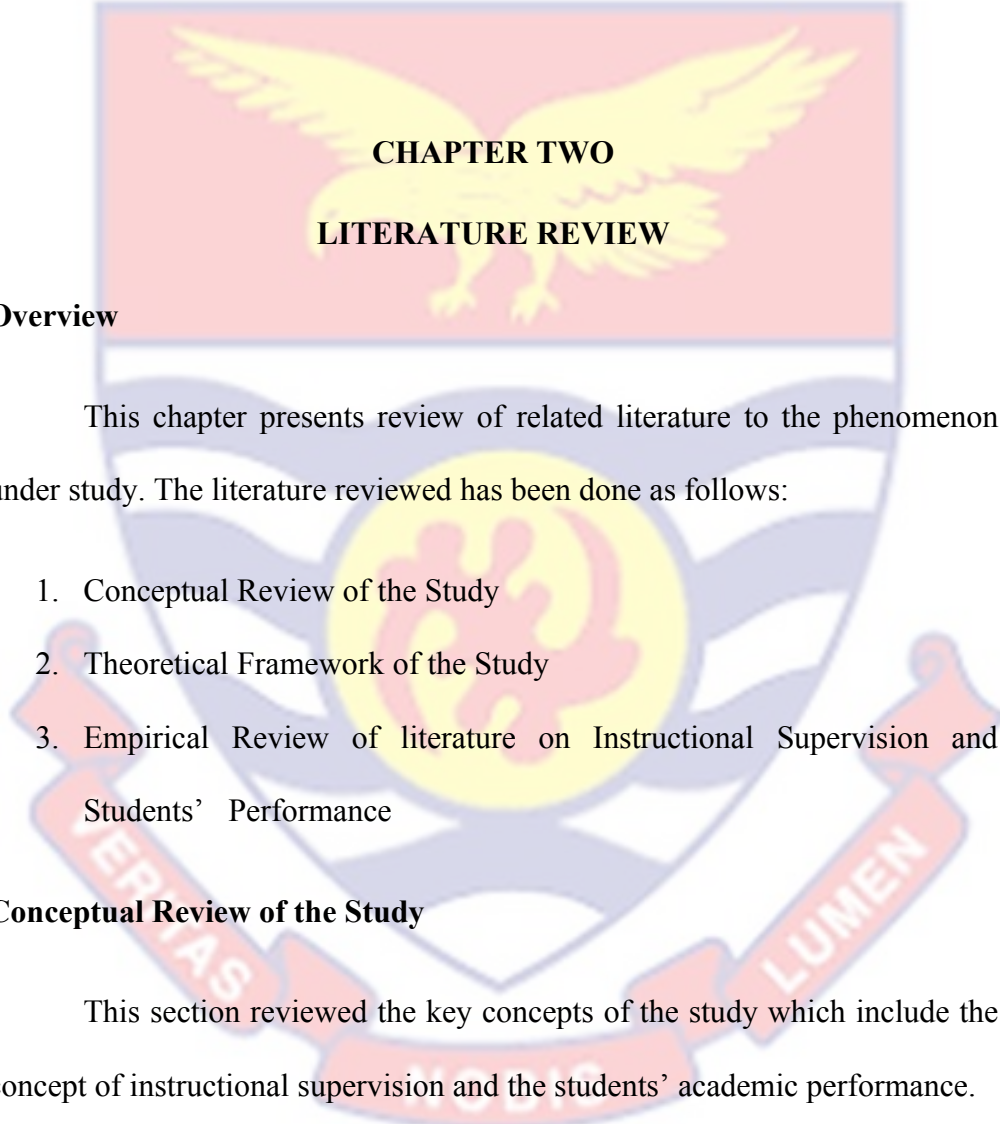
The first limitation of this research work is that the questions answered by the students, although set by the experts, were not standardized as they were only objective tests. Moreover, the study was confined to three senior high schools in Ashanti Region of Ghana. Therefore, the findings of the study can only be generalized within the context of these three schools. That is to say, the findings from this study cannot be generalized beyond these three institutions since the study was confined to only these three senior high schools.

Organisation of the Study

The research work has been organised into five chapters. Chapter one presents the background of the study, the statement of the problem, the

purpose of the study, delimitation, limitations and organisation of the study. The chapter two contained literature review which includes theoretical framework, conceptual framework and empirical review of the study. The third chapter covers the methodology used in the conduct of the study which includes, the research design, population of the study, sample and sampling techniques, data collection procedure, instruments for data collection, procedure for analyses and chapter summary. The fourth chapter touches on results and the discussions of the findings. The fifth chapter captures summary, conclusion, recommendations and suggestion for further research.





CHAPTER TWO

LITERATURE REVIEW

Overview

This chapter presents review of related literature to the phenomenon under study. The literature reviewed has been done as follows:

1. Conceptual Review of the Study
2. Theoretical Framework of the Study
3. Empirical Review of literature on Instructional Supervision and Students' Performance

Conceptual Review of the Study

This section reviewed the key concepts of the study which include the concept of instructional supervision and the students' academic performance.

The Concept of Instructional Supervision

From different authors, instructional supervision concept has been defined variously. For example, instructional supervision, by the definition of Laming (2009), is characterized by the monitoring of teachers' classroom

engagements with students, provision of guidance and assistance for teachers in realizing instructional objectives, sharing ideas between schools' authorities and teachers to facilitate an enhanced teaching and learning quality in schools for the purpose of improving students' learning achievements. Lawlor (2013) describes instructional supervision as distinct from school supervision to mean the collaborative process involving the school authority and teachers to monitor and review teachers' instructional techniques, and teaching and learning experiences of students with the aim of improving educational quality by assisting teachers in the areas of continuous professional development.

Zepeda (2007) defines instructional supervision as an ongoing process meant to monitor and improve teaching and learning in schools by promoting teachers' continual professional development. By definition, Danielson (2010) considers instructional supervision as sequential activities by which educational officials work through people such as heads of schools and heads of departments of schools to collaborate with teachers through monitoring process to ensure that teaching and learning results in effective realization of curriculum objectives and the ultimate improvement on the quality of education for all students. Eisner (2012) also define instructional supervision as the continual engagement between the school's authorities and the teachers before, during and after instructional hours with the ultimate aim of improving instructional processes for the benefit of students by helping teachers to overcome their pedagogical weaknesses and maintain their pedagogical strength. Baines, Charlesworth and Turner (2014) succinctly explains instructional supervision as the dimension of educational management and administration concerned with cooperative interaction between school

authority and teachers to bring about instructional effectiveness which results in positive students' learning achievements.

From the various definitions so far, it is evident that instructional supervision is expected to be sincere collaborative between heads of schools and teachers, and the fundamental aim is to improve on professional qualities of teachers and develop the quality of education in schools (Hawkins & Shoet, 2012). That is to say that instructional supervision is not meant to victimise teachers and demoralize their professional efforts in the classroom. Glickman (2010) submits that the principal function of any academic institution is to provide direct assistance to teachers that would enable them to grow professionally on their jobs for effective delivery of their classroom functions. One of the effective ways to do this, according to Davy and Baddoe (2010), is to supervise the teaching processes to assess the needs of the teachers that the schools can help address immediately or in the long term. In-service training, group development and action research are some of the ways the school may offer assistance to the teachers. In doing this, the school should have in mind the primary aim of improving the quality standard of the education delivered to the students which is attested by the students' academic performance (Haringey, 2009).

Lawlor (2013) acknowledged that instructional supervision is not a hostile confrontational technique used by school administrators to merely find fault with teachers in their core duties. Rather, the author believes that instructional supervision is a friendly, handholding giving by a superior or a leader of instruction with superior professional skills and/or knowledge to colleagues in the teaching profession, and the overall motive is to collaborate

with them in the school to nurture and develop ‘professional learning community’ (Lawlor, 2013).

Cousins (2010) reports that supervision as a concept evolved alongside the evolution of the schooling system and its introduction in the schools in relation to instruction was to ensure improvement on teaching and learning experience via professional growth and development among the teaching staff. The fundamental goal of instructional supervision is to boost students’ performance and ensure high standard of education. Glickman et al. (2008) discussed that instructional supervision is effected to spruce up the effectiveness of teaching methods and also to support teachers to undergo professional growth and development. Archibong (2010) asserted that although instructional supervision has been variously defined by different authors, the central idea that holds true for all the definitions given is that the concept is intended for school administrators and managers to ensure that instructional supervision ultimately leads to improved teaching and learning as well as progressive professional growth and development of the teachers.

Through instructional supervision, avenues are opened for teachers to be reshaped professionally via in-depth studying and appreciation of how teachers interact with students, how students interact with one another, and also how the teachers undertake their instructional activities with reference to their professional standard. Harvey and Henderson (2014) suggest that teachers must be assisted by the supervisors to attain their full potentials through instructional supervision. They further stated that supervisors are obliged by their duties to monitor the teachers rightly to question the rationale for using their teaching methodologies and subsequently give them the

feedback concerning the standard and best practices that can aid them to enhance their teaching skills (Harvey & Henderson, 2014). Instructional supervision gives the supervisors and the teachers the chance to collaboratively work towards bolstering students' learning.

Usman (2015) asserted in a study that poor supervision of instructions in schools poses a serious limitation for both schools' objectives realisation and students' academic achievements. The author argued that prudent measures must be instituted to ensure that supervisors in schools have an array of instructional supervisory tools so that their work could have the needed effect on the teachers' service delivery in the classroom. Supervision of instruction in schools is a two-prong concept in terms of purpose: the first is to help boost the professionalism of the teachers in the areas of growth and development; and the second is meant to improve on the academic achievement of students. In the light of the foregoing, it can be observed that instructional supervision is evidence of instructional leadership shown by school authority. There is a general perception that instructional supervision helps not only the teacher to grow professionally but also the students to show seriousness in their academic endeavours. It assists through apt planning and guidance in driving teaching and learning to its predefined destination. Supervision of instruction, according to Okendu (2012), makes a way for teachers to improve professionally and also to unearth their creativity in teaching. In summary, instructional supervision provides an opportunity for teachers to improve instructional processes through a carefully chosen instructional strategy and a better articulated content for improved students' performance. This study therefore espoused the definitions and views shared

by the authors of the literature reviewed above. This research work thus sought to ascertain instructional supervision practices in the selected schools from the angle of the above definitions.

Styles of Instructional Supervision

Although instructional supervision has been touted to have great importance for students' success in the school generally, its impact significantly depends on the type of supervision a supervisor adopts. On this score, Acker and Hardman (2011) differentiate among three major styles of instructional supervision available to any supervisor of a school to choose from. They are collaborative instructional supervision, autocratic instructional supervision and democratic style of supervision.

Collaborative Instructional Supervisory Style

Smyth (2015) submits that collaborative instructional supervision style is underpinned by clinical instructional supervision theory and it is sometimes referred to as clinical collaborative instructional supervision. Glickman (2010) makes a case that collaborative instructional supervision views the whole process as potential problem identification and problem solving shared between the supervisor and the teachers. Once an instructional problem is identified, the supervisor partners the teacher to strategize and implement mutually proposed action plan viewed to be helpful in addressing the teaching and learning problem. The supervisor provides for the teachers a guide for the problem-solving procedure and also gets them concentrated on their shared responsibilities in the solution process. The collaborative approach calls for an enforceable mutual agreement between the supervisor and the teachers about

the standard, steps and the framework for boosting instructions post-supervision. The deal is struck between the teachers and their supervisors regarding the action plan for the supervisory process as well as the post-supervision instructional improvement. The action plan for instructional improvement is designed by consolidating the views of both the supervisor and the teachers supervised. Should the plan fail to reflect the convinced and mutually accepted view of any of the parties, the dissatisfied party reserved the right to refuse to accept the plan and call for re-discussion. According to Glickman (2010), the parties should, however, be prepared for modification of views that suits changing situation and should not be 'headstrong' about their opinions.

Kabui (2013) indicates that the collaborative approach preaches equality between the supervisor and the teachers being supervised. For this reason, the supervisory plans together with the post-supervision instructional remedial action plans are mutually agreed upon between the supervisor and the teachers. In spite of the message of equality and partnership embedded in the collaborative model, the supervisor still remains superior in providing a guide for the supervised teachers to address any potential shortcomings identified in the instructional process. The supervisor continues to actively participate in the interaction with the teachers in the problem resolution process. This approach equally furnishes the teachers the chance to offer suggestions and options for instruction delivery improvement, going forward.

The research work of Ibrahim (2013) sought to ascertain from the teachers in the United Arab Emirates' pre-tertiary schools the approach of instructional supervision they preferred. The study revealed that more than

83% of the respondents cited collaborative instruction supervision as their preference. They indicated that the collaborative instructional supervision is much more interactive than any other approach since it permitted the opportunity to plan the process together with their supervisors. From their narrative, it can be inferred that the approach creates cordial relationship between the supervisors and the teachers, and thus they both own the whole supervision process. The process is not evaluative but seeks to improve the relationship between teachers and their supervisors.

The supervisors' observations and feedback obtained via their analysis with their interactions with the teachers, according to Kimosop (2007), provides a good avenue for the teachers to develop their confidence levels and improve their learning process. This is because the information which is given to the teachers as feedback from their supervisors is from the shared information between the two parties and thus enriched with balanced inputs that could be of great help to the teachers for their professional improvement. With the view to supporting the teachers, the supervisors offer them options in terms of diverse instructional skill and approaches that could boost the pedagogical expertise of the supervised teachers. The teachers therefore can develop self-confidence in deploying different teaching methodologies to different classroom setting and different subjects to accomplish an enhanced students' learning achievements.

Developmental Supervision Style

Supervision of instruction which is developmental has the supervisory power concentrated at the very top hierarchy of the school leadership (Acker & Hardman, 2011). The authorized instructional supervisor in the school is

strictly responsible for the instructional supervision in the school. The supervisor has the main goal of aiding the teacher to develop professionally to make the needed impact on the students' academic performance. The head of the school or any authorized person is legally mandated to initiate and implement policies and techniques of supervision in the school. The mandated supervisory officer of the school, under developmental supervision type, carries out the instructional supervision himself/herself (Harbison & Hanushek, 2011). Although the heads of the schools may choose to delegate their supervisory power under autocratic supervision type to persons who directly reports to them, there is always a very close and quick communication between them (Heyneman, 2009). This enables the heads to be in the know of what transpires during the supervision process and also the heads get the chance to give definite instructions to the supervisors as to what to do at any point in time.

Autocratic supervision type empowers the supervisory authority to clearly define and prescribe the duties and the responsibilities of the delegated persons. The supervisory authority in the school describes to the delegate supervisor the activities to be done when supervising the teachers. According to Glanz (2012), the delegate supervisor is usually appointed by an autocratic supervisory head as an inspector of instruction. The instructional inspector thus inspects individual teachers' classrooms to observe what goes on and reports back to the head of the school for further direction, should there be found any challenge to be addressed (Acker & Hardman, 2011). The focus of the autocratic instructional supervisor highlights strict obedience to his/her specified rules by both the delegated supervisor and the teacher. This type of

instructional supervision easily results in conflicts, frictions and antagonism between the school leadership and the teachers (Harvey & Henderson, 2014). No room is made for individual teacher's intelligential talent display and creativity as the teachers' personalities are repressed into fitting what the schools' authority requires. There is always a waste of talent and energy on the part of the teachers (Glanz, 2012).

Procedure for Instructional Supervision

Carpenter et al. (2012) categorizes instructional supervision procedure into three major phases. In phase one, the main and specific purpose of the supervision has to be established. This can be done after undertaking preliminary needs assessment through either the supervisors' observation or the teachers' own proposal from their own introspective evaluation. Through the needs assessment, the teachers' strength and needs are brought to light and their individual areas of interest in respect of their professional development are discovered (Kinuthia, 2009). All these will guide the supervision goal determination. The specific goal of the instructional supervision may be set to evaluate the implementation results of specific or policy programme introduced by the department of education in the country. Again, it is in the first phase that the purpose of the instructional supervision is determined. The purpose drives the appraisal option to use in the supervision process. The appraisal options available to be chosen from ranging from diagnostic, formative, support intervention visit to celebration visit appraisal (Kinyua, 2010).

The second phase of the instructional supervision define the specific systematic, detailed instructional supervisory actions to be carried out in the school. This is phase is usually referred to as ‘The Build-Up’ phase and it comprises three stages, namely, the pre-conference, the actual activities, and the post-conference stage (Carpenter et al., 2012). The last phase is the third phase which is termed ‘Closure and Move On’ which makes a way for the instructional supervisor to provide the required intervention activity to support the teacher when a shortfall is identified. The third and final phase affords the instructional supervisor to temporarily curtail the teachers’ autonomy particularly, when non-directive instructional supervision approach is adopted, making it possible for the commencement of professional learning community (Kinyua, 2010). The professional learning community in this regard is tasked with the role of providing continual support system to empower the supervised teachers with the needed skill lacking on their part which is identified in the supervision process. The principal activities in this third phase consist of exit conference and plan; recognition and celebration of efforts; and making transition to the activity areas of the professional learning communities set up in the school (Carpenter et al., 2012).

Components of Effective Instructional Supervision

Instructional supervision should not just be carried out but must be carried out effectively in order to achieve its intended purposes. In view of this, Alimi and Akinfolarin (2012) propose ingredients that must be present for instructional supervision to be effective. The researchers stated that effective instructional supervision in school calls for a well-trained staff with the requisite knowledge of various types, approaches and models of supervision.

Armed with the above knowledge, these personnel will be able to deploy the right style and approach of instructional supervision that will help achieve better teaching and learning in schools and also improve on institutional and national educational quality (Alimi & Akinfolarin, 2012). Personnel billed to undertake instructional supervision particularly in the pre-tertiary educational institutions need to possess qualities of interpersonal skills and technical know-how in the field of supervision and the content of the course to be supervised (Gaziel, 2007). Those entrusted with instructional supervision should be people whose mindset is oriented towards promoting teachers' professional growth and learning which eventually will have impact on students' performance positively in schools.

Another indispensable component of effective instructional supervision is availability of logistical support (Ndung'u, 2015). Most often, the supervisors in education do not find themselves in the same institution with the teachers they supervise; they are located in offices different from the schools where the teachers to be supervised teach. In such a situation, the logistics such as vehicles, motor cycles and fuel provision that enable the supervisors' easy mobility become indispensable to ensure the effectiveness of the supervision (Ndung'u, 2015). Again, technology such as software and ICT gadgets that can assist both the supervisor and the supervised teachers to do distant discussion on the outcome of their engagement are crucial to ensure the attainment of instructional supervision effectiveness. Coupled with these, the supervisors need enough financial motivation and incentives to be effective on their job (Blumberg & Weimer, 2016).

Headmasters Approaches to Instructional Supervision

The heads and principals of pre-tertiary educational institutions are charged with the responsibility to undertake regular general and instructional supervision of teachers so that teaching and learning in their schools will be effective (Fitzgerald, 2011). Chapman (2014) asserts that headmasters of schools have a range of instructional supervisory practices they may resort to ensure improvement on teaching and learning which in turn will improve students' academic achievement. With this in view, instructional delivery management should focus on broader purview of teaching-learning process such as timetabling of the teaching and learning; compliance with curriculum standards; staff teaching professional abilities; making available teaching and learning materials and equipment; institution of rules and regulations to govern the conducts of teachers and students to facilitate effective teaching and learning, and to also promote teachers' professional growth and development (Dipaola & Hoy, 2013).

Heads of schools are enjoined by dint of their leadership position to ensure professional development and competence of their teachers (Sule, Eyiene & Egbai, 2015). Instructional supervision offers school leadership opportune avenue to help the professional development of their staff members through micro-teaching; moderation of examination question papers and marking schemes; workshops and conferences organisations; regular observation of classroom lessons; checking of teachers' lesson notes and scheme work as well as the students' notes; checking the teachers' attendance in terms of their regularity and punctuality in class (Sule et al., 2015). The success of the principal and heads of schools in carrying out the above tasks depends on their professional capacity in the field of instructional supervision

meant to motivate teachers to deploy their individual skills that will be beneficial to the students and the school in general. Again, certain instructional supervisory practices have been identified by Charles et al. (2012) as key and must be implemented by principals so as to improve on the school's quality standard. These practices include making sure that teachers' classroom instructions comply with the curriculum requirements; ensuring proper preparation of lesson plans by the teachers; ensuring cordial teacher-student relationship; and appropriate use of teaching and learning materials and aids by the teachers in their instructional activities (Charles et al., 2012).

Dangara (2015) proposes the following as the summary of the supervisory practices that the headmasters of pre-tertiary schools are expected to undertake for instructions to be effective in schools.

Classroom observation and visitation

The basic instructional supervisory practice that heads of schools must carry out is classroom observation and visitation (Dangara, 2015). Classroom observation and visitation affords the principal the chance to see how the teachers implement in classrooms the lesson plan they prepare and present (Sule et al., 2015). To effectively do this, school heads are expected to design properly a schedule of their supervisions of teachers. The schedule should spell out the expected standard the teachers must meet in carrying out their classroom teaching activities. The standard may include how the teacher manages the classroom in terms of students' discipline maintenance, provision for learners' differences in the lesson delivery, lesson presentation style, display of content mastery, engagement of learners' interests and attention, and the entire methodology for lesson delivery (Dangara, 2015). In order not

to disturb the class, the instructional supervisor may choose to videotape the lesson or make an observation from a distance without any comment. Afterwards, the supervisor can have post lesson discussion about all the observations noted so that remedial measure can be implemented to help improve on the teachers' instructional delivery skills.

Pre-observation and Post-Observation Conferences Organisation

School heads organises pre-observation, actual observation and post-observation conferences with the teachers involved in the instructional supervision process. These conferences assist the school heads to forge a good working relationship with the teachers being supervised, and also offers the teachers opportunity for mentorship during instructional supervision period (Heyneman, 2009). This assists in the facilitation of the teachers' instructions quality improvement which impacts on the academic performance of the students. The organisation of the post-supervision conference affords both parties (the instructional supervisor and the supervised teacher) to embark on deliberation about issues which arise from the supervision; the problematic aspects of the supervisor's approach is put forth by the teachers for redress whilst the supervisor also discusses with the teachers the shortfall in their instructional approach for correction and improvement (Aseltine, Faryniarz & Rigazio-Digilio, 2006). In their study which sought to ascertain the kind of discussions that occurred in post-observation conferences in Texas pre-tertiary schools, USA, Wall and Hurie (2017) revealed that post-observation conferences offered a platform for critical reflection by the supervised teachers. The researchers further noted that such a platform is a forum for dialogue between the supervisor and the teachers on what should be unlearned

and what should be relearn by the teachers in order to bolster their teaching capacity for improved students' academic achievement in the school (Wall & Hurie, 2017).

Inspection of Teachers' Teaching and Learning Resources

Teachers' preparation before going into classroom is key to determining the effectiveness of their instructional delivery (Byabagambi, 2007). As part of their professional responsibilities, teachers are required to prepare their instructional resource pack such as schemes of work, lesson plans or notes, and information sheets before they go to classroom to deliver their lessons (Robertson, 2010). In their supervisory capacity, heads of pre-tertiary schools have the duty to inspect these instructional resources of the teachers to ascertain their standard and propriety before teachers enter classrooms to deliver lessons (Flora, 2014). The teaching and learning resources pack aids the teachers to be focus in their instructional delivery. Teachers without these instructional materials, particularly lesson plans, schemes of work and information sheets, become incapacitated pedagogically and they could end up creating learning confusion among students (Robertson, 2010). It suggests that any professional teacher who is well-intentioned to make meaningful impact on his or her students will have to spent enough time to prepare before go to classroom to teacher. Heads of departments in high schools and head teachers in basic schools in executing their instructional supervisory functions do critical routine checks of these documents to validate them before teachers are permitted to use these TLMS for their instructional delivery (Copeland, 2012).

Inspection of these instructional materials by instructional supervisors causes teachers to have a sense of responsibility in their preparation towards the performance of their classroom duties (De-Grauwe, 2007). The findings gathered by Sule, Eyiene and Egbai (2015) from their study revealed a strong positive correlation between head teachers' inspection of teachers' lesson plans and the effectiveness of the teachers in classroom. Similarly, Ayeni (2011) had early on mentioned in his work that teachers' effective execution of their pedagogical responsibilities is positively and strongly influenced by the schools' supervisory authority's regular appraisal of the teachers' instructional plans. The author indicated that once the lesson plans of the teachers are regularly supervised by heads of schools, the teachers become obliged to be meticulous in their preparation for lessons, and this enriches the lesson delivery quality much more than the snappy, irregular instructional observation done by the schools' heads (Peretomode, 2004). Ultimately, students' academic performance will be improved as a result of a careful preparation of lesson plan by the teachers.

Inspection of Learners' Notes and Instructional Exercises

Another approach that heads of schools use in supervising teaching and learning in school is the inspection of the students' notes (Hughes & Olney, 2012). Doing periodic checks of the notes given to the students by the teachers' aids school heads to verify whether or not the objectives set in their lesson plans were actually pursued and achieved. Another way to find out if the teachers' lesson plans correspond with the actual instruction delivered in the class is by the head teachers' checking the class exercises, assignments and projects contained in their exercise books (Hughes & Olney, 2012). The

verification of the students' notes and exercises can be randomly done by the instructional supervisor. Kabui (2013) conducted a study in Naivasha Central public schools in Kenya to ascertain how the frequent checks of pupils' notes and exercise books by the schools' head teachers affect the pupils' performances. The study established that although such an exercise had a positive relationship with pupils' class performance, majority of the primary school head teachers could not frequently embark on examination of the pupils' notes and exercise books. They blamed their failure mainly on their administrative responsibilities and the large number of the classes they were handling (Kabui, 2013).

Organisation of In-Service Training Programmes for Staff

Lastly, the leadership of pre-tertiary educational institutions also plans and implements in-service training programmes for the teachers to improve on their instructional skills. Such programmes also help the teachers to be refreshed with new pedagogical approaches and methodologies that could aid them to make meaningful impact on the students (Fischer, 2011). These in-service training programmes include organisation of relevant courses and workshops for the teachers make up their instructional shortfalls. In the long-run, this would lead to the teachers' improved professional growth and in turn drive students' performance positively (Acheson & Gall, 2011).

The Definition and Concept of Students' Academic Performance

Students' academic Performance has been defined by Harkin and Webb (2016) as the real achievement of students in tests, assignments and projects given by the school as a means of students' academic assessment. It is the attainment obtained by the students in any given exercise meant to assess

the students' intellectual ability in school. Thomas and Israel (2014) consider students' academic performance as the overall score gotten by the students in tests organised by a school bordering on topics treated. Balduf (2009) also sees academic performance of students as how the students are ranked intellectually with reference to a particular standard or set criteria and the ranking is done on the basis of the scores the students secure from an assessment instrument and/or technique. According to Jahanian and Ebrahimi, (2013), students' academic performance refers to how good or bad the students do in an examination conducted in the academic institution attended by the students. Alessandri and Cepale (2020) on their part explain students' academic performance to include the totality of the students' cognitive, affective and psychomotor output in the course of their study in academic setting. By this definition, the researchers mean that students' academic performance is not restricted to only their examination scores or grades but also include how well the students do in all other assignments and projects which may not necessarily require cognitive efforts. Hallinger et al. (2009) are equally of the view that the concept of students' academic performance should be based solely on a sitting-test scores or subject grades secured by the students from one-off examination. They argue that students' performance should be measured by the school, taking into accounts all the students' academic efforts made in during the assessment period. This may include their class contribution, the punctuality and regularity in class for lesson, their active involvement in the lesson as well as their creativity in responding to questions given both in outside class work and inside class work (Hallinger et al. (2009); Alessandri & Cepale, 2020). This research work adopts the

definitions given by Alessandri and Capele (2020) and Hallinger et al. (2009) because they provide broader perspectives to academic performance which is one of the constructs considered in this study.

Sule, Eyiene and Egbai (2015) discuss that generally, the definitions for academic performance of students can be categorized into two domains: the first domain defines the academic performance of students from subjective viewpoint, whilst the second domain views academic performance from objective perspective. The subjective definition considers students' academic performance from the students' own judgment and the judgment of by-standers without reference to any generally accepted standard. The objective definition however determines students' academic performance by referring to predefined scientific criterion usually represented by numerical value as the measure of the students' knowledge or by the extent to which students adapt to school work and the whole educational setup (Sule et. al, 2015).

Determinants of Students Academic Performance

Usman (2015) opines that students' academic performance is influenced by several factors which may be school-related or non-school related. The school related factors cover availability of facilities, teaching and learning resources; the quality level of school leadership in place; the quality of teachers in the school; the students' attitudes to school and academic work; and the teachers' attitudes towards their pedagogical duties. The non-school related factors encapsulate socio-economic background of the student' parents; the level of parental involvement in the students' education; parents'

educational level and occupation; and biological make up of students (Usman, 2015).

According to the observation of Alessandri and Cepale (2020), central to the success in the students' academic work is their own attitudes towards school and academic work. Tesfaw and Hofman (2014) contend that a key driver of students' academic achievement is their readiness and inner motivation for success. The school may have the needed classrooms, be furnished with all the necessary teaching and learning resources, and also be staffed with enough professional teachers who are committed to their pedagogical responsibilities, if the students are not academically oriented and motivated, there will be no positive achievements from the students (Hughes & Olney, 2012).

As revealed by Usman (2015), socio-economic background of the students' parents has significant implication for the students' schooling processes and their academic wellbeing. In a social setting where formal education is not perceived to have any value for societal and individual development, students from such social environment may likely resile from their academic efforts even if they show personal interest in making a mark in formal education (Ndungu'u, 2015). The work of Muriithi (2012) pointed out that in certain African cultural settings, formal education was previously not valued and was rather seen as the preserve of some class of individuals. Such societies hardly made efforts to support their children to obtain basic form of formal education and students from those cultural environments were identified to struggle through school (Muriithi, 2012). High school dropout rate was reported by Ndungu'u (2015) in his study in Kenyan's communities

where the culture had very little regard for formal education. The study further mentioned that students from those communities lack the needed material and emotional support from parents and guardians for which reason they felt demoralized to pursue their academic dreams.

Wild-Tuominen and Korhonen (2018) make a case to suggest that economic standing of students' parents has connection with low cultural enlightenment. They explained in their study that economic difficulty is usually connected to less culturally enlightened communities and student from such communities are mostly among those whose tend to display poor attitude towards schooling (Wild-Tuominen and Korhonen, 2018). Parents with strong financial background are usually found in advanced cultural communities and they mostly provide the necessary financial and material support to their wards in school to reach a high height (Zaare, 2013). Students of such parents, more often than not, tend to do better in school than those whose parents are confronted with financial difficulty. Students of poor parents are affected materially, physically and psychologically in their schooling: materially the students find it challenging to get the learning resources that should be provided by their family (Wall & Hurie (2017). Physically, some of these students are faced with the problem of hunger whilst in school and this together with their struggle for learning resources at home affect their psychological stability and eventually their performance in school (Zaare., 2013; Wall & Hurie, 2017).

Parents' level of involvement in their children's education is a crucial determinant of the students' academic achievements in school (Smith & Skrbis, 2016). Regardless the educational background of the parents, their

level of involvement in their children education has significant influence on how these children fare in school (Schnabel & Alfeld, 2012). Parents who express strong interest in their wards' education are inclined to providing them with learning materials, financial assistance and psychological support. Students who have this sure parental support have 'sound mental state' and powerful inner drive to aspire for excellent academic performance (Nakamoto & Schwartz, 2010).

Biological conditions of students also play an important role in determining their academic achievements in school (Nurdyansyah, Rais & Aini, 2017). Biological conditions such as the bodily health, mental health status and the intelligence quotient primarily affect how students fare in their academic efforts in school (Carpenter et al., 2012). A sound bodily health and mental health provides productive intellectual strength for cognitive exercise (Harvey & Henderson, 2014). That is to say when the body and the mind are sound in health, a person has almost unlimited potential to accomplish any humanly achievable goal set (Kabui, 2013). In effect, students with good bodily health and sound mental condition are in the right position to do creditably well in their academic efforts in school. Furthermore, students with high intelligent quotient (IQ), which is the scientific measurement of a person's intelligence level, have the intellectual capacity to perform better academically in school than those with relative low IQ levels (De-Grauwe, 2016).

It has been observed from the above discourse that several factors interplay in determining students' academic performance. This study however

set out to consider the extent to which instructional supervision, a school-related factor, influences students' academic performance.

Indicators of Students' Academic Performance

Bush (2003) submits that the academic performance of students is evaluated using certain indicators. These indicators include the students' class contribution, their school attendance, marks scored in examination, creativity on assignment, innovation and discoveries of new things via research by the students. Although one commonly used indicator of students' academic performance is the marks scored during test or examination, several arguments have been put forth to fault the exclusive use of test scores alone as a measure of students' academic achievements. Also, authors such as Fitzgerald (2011), Alimi and Akinfolarin (2012) and Elacqua (2016) are of the opinion that since several activities make up the academic engagements of learners, using one activity alone makes learners' evaluation process narrow and insufficient. These authors therefore suggest that all the activities which are entailed in the teaching and learning processes should form part of the students' performance indicators. However, for the purpose of this research, the academic performance of the students was measured by using an indicator of examination scores of the students which is commonly used and generally accepted across the academic environment.

Conceptual Framework of the Study

The conceptual framework gives pictorial view of the relationship among the various constructs measured in this study. It shows how the major

variables considered in this research relate to one another as presented in Figure 1.

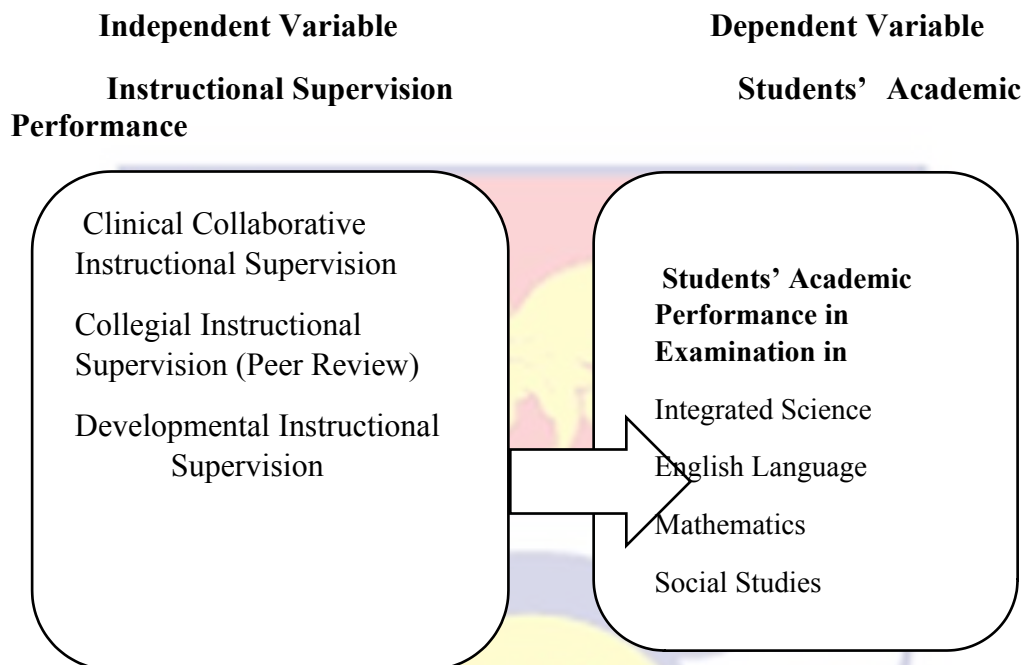


Figure 1: Conceptual model developed by the researcher (2020).

From figure 1 the model shows from left to right the independent variable and the dependent variable. The independent variable is the autonomous construct which is hypothesized to have effect on the dependent variable. The independent variable is represented by instructional supervision, a major construct considered in this study. The instructional supervision is defined by three main sub-constructs, namely, collaborative instructional supervision, developmental instructional supervision and collegial instructional supervision. This study seeks to identify these three styles of supervision as being practiced in the selected schools by the headmasters and heads of departments. They are grounded in the three theories reviewed in this study—Clinical Supervision theory championed by Cogan (1973), the theory

of Developmental Supervision by Glickman (1995), and Collegial Supervision theory by Goldhammer (1980) and Glatthorn (1990). The dependent variable denoted by students' academic performance is also defined by the sampled students' results from tests conducted by the researcher. The tests were conducted in the four core subjects (English Language, Mathematics, Integrated Science and Social Studies).

This study based on the conceptual framework sought to assess if any of the three supervisory practices are carried out by the selected schools' authorities. Again, the study also attempted to ascertain whether or not these supervisory practices have any notable influence on the students' academic performance as defined by their end of term examination results. Finally, if an influence is identified, this research work also sought to determine the nature of the influence that the instructional supervision have on the students' academic performance in the selected senior high school schools.

Summary

It can be observed that lots of the literature reviewed demonstrated that some of the instructional supervisory practices include directive, non-directive instructional, and collaborative instructional supervision. These instructional supervisory practices are grounded in three popular instructional supervision theories—clinical instructional supervision theory, collegial supervision theory and developmental supervision theory. Each instructional supervision approach by school authorities is expected to be guided by these theories in terms of their purpose and goals for the supervision. Furthermore, a mix research results were observed from various prior studies on the relationship

between instructional supervision and students' academic performance in pre-tertiary schools.

In conclusion, although several studies have been carried out to determine the relationship between instructional supervision and students' academic performance mostly making use of regression analysis, there is still a gap to be filled since most of these studies were carried out in jurisdictions different from Kwadaso Municipality and at different past time. This study is of the view that differences in geographical settings as well as passage of time make the replication of this study relevant.

Theoretical Framework

This section discusses the relevant theories considered to be appropriate to support this study. In the context of this study, instructional supervision was defined by three main constructs, namely, clinical collaborative instructional supervision (underpinned by the theory of clinical supervision); collegial instructional supervision (grounded in collegial instructional supervision theory), and developmental instructional supervision (anchored in developmental supervision theory). Therefore, the three theories were reviewed in this subsection in relation to the study.

The Theory of Clinical Instructional Supervision

Clinical instructional supervision theory was originally propounded by Morris Cogan and Robert Goldhammer in 1960 to support instructional and school supervision model (Goldhammer, 1969; Goldhammer, Anderson and Krajewski, 1993). This theory came out with an instructional supervisory practice termed 'clinical instructional supervision' which states, that

classroom data related to teachers' pedagogical engagements with students should be collected for the purpose of diagnosing possible challenges and, supporting the teaching to boost their instruction delivery skills (Cogan, 1973). By the stipulation of clinical instructional supervision theory, instructional supervision is segmented into five stages and these include instructional supervisory planning, pre-observation conference, observation, data processing, and post observation conferences (Nolan, Hawkes & Francis, 2003). The five stages of clinical instructional supervision are interconnected and are carried out to eventually provide educational supervisory support that could permit teachers to be reflective of their instructional delivery practices and improve on them (Nolan et al., 2003). Clinical instructional supervision theory also underscores the need to replicate professional medical practices termed 'clinic' in the educational arena to pave the way for educational supervisors and teachers to personally meet and collaboratively look for ways of solving classroom problems just as physicians do with patients to address their medical problems (Nolan & Hoover, 2004).

In recent times, this dimension of instructional supervision has assumed the front seat in instructional supervision application especially, at the foundational level in the education arena (Nolan & Hoover, 2004). Cogan (1973) explained clinical supervision as supervisory practices designed for the improvement of the classroom performance of teachers (Holifield, & Cline, 2007). The teachers' teaching data gathered are subjected to analysis through cordial relationship forged and collaborative discussions between the supervisors and the supervised teachers. Clinical supervisory theory thus promotes supervision approach devoid of master-servant relationship and

encourages ideas sharing in the supervision programmes and procedures meant to ultimately improve on students' performance via improved classroom behaviours of teachers.

Acheson and Gall (1987) who were equally adherent disciples of clinical supervision theory view clinical instructional supervision practice as a unique process and approach to teacher supervision whose foundation is built on interactive relationship between the supervisor and the teachers. The focus of this instructional supervisory practice is to aid teachers to enhance their classroom behaviour during instruction delivery through dialogue between their supervisor and themselves. In the long-run, clinical supervision must result in improved students' academic achievement to boost quality of education in the educational institution and the entire educational system. Smyth (1984a) opined that without a face-to-face observational and interactive dialoguing between the supervisors and the teachers intended to develop professional rapport for improved instructional delivery, the clinical aspect of the supervision is defeated.

Garman (2000) also made a point that just like medical clinic where the patient and the physician come into face-to-face contact with each other to discuss the patient's medical condition for solution, so is the clinical supervisory practice. The teacher who is being supervised must have a friendly and comfortable dialogue with the supervisor and the supervisor is equally expected to be personally present to make classroom observation so that the two can together look for solution to what has been identified as an instructional problem (Garman, 2002a).

The theory of clinical supervision dictates that the supervisors should not strictly impose on the teacher their ideology and supposed solution to the challenge identified (Garman, 2002b). Instead, any instructional delivery shortcoming should be tabled for discussion between the supervisor and the teacher during observational and post-observational conferences in order to find solution. The solution found should incorporate where practicable the ideas of both the supervisor and the teacher but should not be didactically imposed from the supervisors only. Garman (2002b) contends that clinical supervisory theory lays special emphasis on addressing problems emanating from teachers' instructional approach. The theory suggests a development of framework for a change and an improvement in teaching techniques resulting from objective instructional observation and analysis by the supervisors.

In explaining clinical instructional supervision theory, Smyth (1984 a) stated that the qualifying word 'clinical' is defined to distinguish its usage in the educational environment from the medical usage. The term clinic as used in medical practice connotes interaction between the physician and the patient where the patient is closely observed in reality and treated according to the actual medical problem diagnosed (Smyth, 1984). This is quite distinct from experimental laboratory study. In similar vein, clinical instructional supervision entails close and actual observation of instructional delivery of teachers in classrooms by the supervisor to identify their real teaching challenges and the discussions are held collaboratively for solution (Garman, 2002a). The solution is arrived at by first gathering classroom data from instructions delivered by the teacher, and the data is analysed with the view to designing redress strategy (Goldsberry, 2008).

Goldhammer (2001) indicated that clinical supervision theory explains instructional supervisory dimension that permits the supervised teachers to personally take possession of the supervision. It therefore seeks to eliminate antagonism that characterises superior—subordinate relationship in the supervision process. Instead, it promotes instructional supervision method that assists and support teachers whilst encouraging coaction and discussion between the school authority and the supervised teacher on strategies to improve the quality of instruction delivery. Clinical instructional supervision, in the opinion of Smyth (1984a), goes beyond processes and procedures but rather it embraces a relationship between supervisors and teachers meant to help teachers to make meaning and understanding from their teaching experiences. It aids the teachers to identify where their strength and weaknesses are in their instruction delivery. It also assists the teachers to assess their teaching methodologies to ascertain if the actual instructions delivered match up with what is stated in the lesson plan (1984a). Clinical instructional supervision approach offers the teachers an opportunity to analyse the impact of implementation of change in the teaching behaviour (Smyth, 1984b).

Through clinical instructional supervision, supervisory skills of school managers and the professional expertise of teachers are developed (Smith, 2004). School managers and teachers get the opportunity to work in collaboration with one another in finding remedies for teaching and learning challenges and this has good effect on the students' learning. It is argued that clinical instructional supervision has a purpose of helping teachers to alter their individual instructional delivery pattern (Glatthorn, 2007). It also allows

the teacher to have the chance for reflecting on their classroom instructional experiences and practices, and at the same time the teacher is able to exercise control over their growth professionally (Glickman & Ross-Gordon, 2004). The supervisor is offered the opportunity under clinical instructional supervisory model to embark on practical classroom observation of the teachers' delivery of instruction, and together with the supervised teacher gather data for analysis. This helps the teachers to find their identity and boost their professional status. Holifield and Cline (2007) also highlight that the term 'clinical' connotes personal encounter meant to forge a relationship between the supervisor and the teacher and the primary focus is to assess the teacher and his classroom practices to help improve upon them. Okendu (2006) explained that the inclusion of the word 'clinical' in the instructional supervision technique exudes the concept of objectivity that should feature in the supervision process so that the supervisor will fairly conduct empirical classroom data gathering through supervisory observation of the teachers' teaching. The impassionate data collected in the real classroom setting by the supervisor are processed by the collaborative efforts of the supervisor and the teacher to find lasting remedies to the problematic areas in the teachers' instructional delivery methodologies (Okendu, 2006).

Smyth (1985) revealed that by the use of the word 'clinical' in this instructional supervision model, the teacher is assisted through in-class, face-to-face observation by the supervisor so that the data collected and processed can aid the teacher to appreciate the teaching and learning complexities aspect of their job. Goldhammer (2002a) again indicated that clinical instructional supervision operates on real teaching, first hand data gathering by the

supervisor in concert with the teachers concerned as well as engagement in other professional activities relevant to the teachers' instructional delivery. According to Acheson and Gall (1987), clinical instructional supervision theory advocates interactive instructional supervisory technique instead of directive method, whilst highlighting a democratic supervision instead of autocratic or idea-imposing approach. Bauer (2003) argues that clinical instructional supervision is teacher-focused rather than supervisor-centred process meant to speed up the teachers' instructional delivery skills. It permits the teacher to reflect on their teaching philosophies, values, beliefs and behavioural orientation.

These constitute the basis of the dialogue between the supervisor and the teachers and they form part of the usually unexamined domain within which the supervisor and the teachers carry out their discussion during the supervision process (Bauer, 2003). This aspect of the theory's advocacy helps the supervised teachers to revise, redesign and modify their teaching values, philosophies, behaviour and practices for the best (Sergiovanni & Starratt, 2002). A very crucial function that the supervisor is enjoined by clinical instructional supervision theory to carry out is to support the teacher to establish an objective for improving their pedagogical skills and selecting areas to be analysed during the supervision for improvement. Given feedback to the supervised teachers in the areas of supervisory interest is the most professionally honest way of directly assisting the teacher to enhance their teaching capacity and this is what clinical instructional supervision theory pushes for (Shantz & Ward, 2000).

Ikegbusi and Eziamaka (2016) state that as it was from the beginning, so it is in this present time regarding the stages involved in clinical instructional supervision model. There are four stages in clinical instructional supervision processes and they are pre-observation conference, actual observation, post-observation conferences, and data processing stage. Each of these stages demands a collaboration between the instructional supervisors and the supervised teachers to ensure that harmonious working relationship is developed. The first major stage of clinical instructional supervision is the pre-observation collegial conference which must take place immediately before the real teaching observation by the supervisor. The pre-observation conference is a meeting held between the supervisor and the teachers to be supervised to deliberate how the supervision itself is to take effect, for instance the lessons to be supervised, areas of interest and the kind of data to be collected for assessment (Aaronson, Barrow & Sander, 2017). The teacher at this stage presents the comprehensive lesson plan of the lessons to be observed to the supervisor to help the supervisor to develop the data collection method and procedure. The observation stage is where the real classroom teaching or instructional delivery of the teacher is observed by the supervisor to collect the 'field data' (Aaronson et al., 2017). The data processing stage revolves on the step-by-step analysis of the teaching data collected on the teachers concerning their classroom presentation; their strength and shortcomings in terms of the instructional delivery methodology and techniques used; and the extent to which they follow the lesson plan and meet the stated lesson objectives (Akinwumi, 2016). The supervisor at this also put the processed data in a format that will be easily understood by the teachers

when presented, and the feedback is given to the teachers ahead of the post-observation conference (Aaronson et al., 2017).

The post observation conference is the final stage involved in the clinical instructional supervision process and this is the stage where the clinic aspect comes to play (Shantz & Wards, 2000). After the teachers have had the chance of going through the written feedback given to them ahead of time by the supervisor, they come to meet with the supervisor at a scheduled time to do face-to-face discussion with them (Bauer, 2003). The supervisor and the teachers meet up to discuss the feedback to conclude on what transpired during the observation period and decide the way forward. Furthermore, it is at the post-observation conference that the feedback on the teachers' practical classroom practices is analysed jointly by the supervisor the supervised teacher, placing emphasis on how to strengthen the teachers' instructional delivery skills and capacity for teaching and learning improvement (Sergiovanni & Starratt, 2002). This stage is the real implementation of the educational clinic where the teachers' pedagogical ability is diagnosed to ascertain the problematic areas to prescribe remedies for redress (Bauer, 2003). The teacher is at liberty at this stage to make all the necessary input as to their reservation about the supervisors' possible erroneous observation. The teacher equally has the chance to contribute ideas that could help develop strategies for enhancing his or her teaching delivery capacity (Charles et al., 2012).

The fundamental canon of clinical instructional supervision is to establish and maintain a working rapport between the teachers and the school authority responsible for instructional supervision so that teaching and

learning can be improved for onward boosting of students' learning outcomes (Chapman, 2011). This professional working rapport is attained in a collegial manner between the teachers and the supervisors through a clinical supervisory model entailing successive, interconnected activities of pre-observation conferences, actual observation, data processing and analysis and post-observation conferences (Bucknell, 2016). In the end, the outcome should boost students' academic achievements in the areas of creativity in class, active lesson participation, and excellent performance in both class and out of class assignments (Chapman, 2011; Bucknell, 2016).

This study situated its framework within the clinical instructional supervision theory because of the purported positive impact it has on both teachers' teaching skills and students' academic performance.

The Theory of Developmental Supervision

The developmental instructional supervision theory caught the attention of educational authors and researchers on supervision in recent years. Its principal proponent, Glickman (1995), stated that developmental supervision theory advocates that the role of the school is to boost teaching and learning by offering direct support service through instructional supervision to the teachers in order to develop their instructional delivery expertise and capacity. The theory holds the position that through developmental supervision model, other teaching auxiliaries such as curriculum development, group and staff development as well as educational research are improved to feed into the quality level of educational delivery in academic institutions (Glickman, 1995). In a much stricter sense, Glickman, Gordon and Ross-Gordon (1998) opined that developmental instructional

supervision approach is more oriented towards solving teaching problems through improving curriculum development. The developmental supervision model gravitates towards supervisors developing changing behaviour in response to the changing instructional delivery needs of teachers (Gordon, 1996). The theory suggests that school authorities and educational supervisors must adopt distinct supervisory styles to enhance teaching and learning in schools. That is to say, by the provision of developmental supervision theory, a single supervisory style should not be adopted and used by heads of educational institution to supervise all teachers handling different subjects in different instructional circumstances (Mohanty, 2008). Instead, supervisors must be dynamic and developmental in their supervisory approach to ensure that diverse instructional supervisory approaches should be engaged for teachers handling distinct subjects in different instructional settings (Ibrahim, 2013). Developmental instructional supervision calls for development of alternative approaches to instructional supervision so as to assist teachers to enhance their instructional delivery skills.

It has been argued that clinical and developmental instructional supervision theories carry common philosophy, the two theories however demonstrate distinctions in their approach and purpose (Aggarwal & Sachdeva, 2007; Mohanty, 2008). While clinical instructional supervision seeks to ascertain and improve teachers' teaching methodologies usage and the content mastery, developmental instructional supervision theory focuses on how to improve supervisors' skills to adapt to individual teachers' concerns in their professional developmental stages (Aggarwal & Sachdeva, 2007). That is to say, developmental instructional supervision theory focuses on addressing

an individual teachers' unique needs by assisting the supervisors to modify their supervisory approach to suit the individual teacher's unique condition (Mohanty, 2008). The theory of developmental instructional supervision is relevant to this study because of its acclaimed influence on teachers' instructional delivery efficacy and on students' academic success.

The Theory of Collegial Instructional Supervision

Collegial instructional supervision theory proposes that in order to ease the heavy burden on heads of academic institutions and to effectively execute their educational supervisory function, teachers themselves can be tasked in delegation by their supervisors to carry out peer instructional supervision (Glatthorn, 2007). In other words, under the collegial instructional supervision theory, the leadership of schools charged with the instructional supervision responsibilities delegates their instructional supervisory powers to the teachers to be supervised to effect the supervision of themselves (Sergiovanni & Starratt, 2002). The teachers embark on peer review of their own instructional delivery, critique their own methodologies and provide the necessary remedial course of action for the improvement of their teaching skills. This theory emanates from the concept of 'effective leadership through the development of leaders from followers' (Mankoe, 2002).

Glanz (2007) stated that school leaders do not operate in seclusion from their junior colleagues; they get strategic actions implemented and goals achieved through their junior staff. What is more, school leaders do not have omnipotence and omnipresence nature to discharge their administrative and managerial roles; this thus calls for delegating some of their responsibilities to

other staff members for leadership effectiveness (Sileo, 2011). The collegial instructional supervision theory underpins the instructional supervision delegation decision by the school leadership to allow teachers to collegially supervise themselves in their instructional delivery responsibilities (Reigeluth, 2013). In the argument of Selio (2011), application of collegial instructional supervision in schools promotes a sense of accountability among teachers and thus causes a positive change in teaching and learning in schools. Collegial instructional supervision also encourages professional cooperation among teachers, and also promotes collaboration and mutual respect between teachers and heads of schools (Glanz, 2007). This model of instructional supervision, Reigeluth (2013), fosters teachers' professional growth and development through peer supervision and professional dialoguing as well as systematic coaction and research.

The issue that many researchers have raised regarding instructional supervision is the means by which collegiality of instructional supervision drive positive implication for students' academic achievement (Glatthorn, 2007). The argument is that two separate issues are involved here; getting improved skills and expertise through shared values and concerted action research under collegial instructional supervision is one thing, and rightly applying these experiences, enriched skills and best practices to improve teaching and learning in the school is another (Wawira, 2012). When collegial instructional supervision is properly deployed, they can result in collaborative research toward finding practical solution to problematic areas in the teachers' classroom teaching delivery. This, according to Reigeluth (2013) results in improved teaching and learning and students' performance academically. One

of the outstanding practices of collegial instructional supervision is information sharing among colleagues such as comparing lesson notes among same subject teachers and sharing research results on certain areas of professional interest. Most commonly, heads of pre-tertiary schools make use of directive instructional supervision strategy which keeps the teachers at the back bench and at the receiving end. However, collegial instructional supervision is recommended as a key model of modern teachers' professional development on-the-job which mandates principals to accord teachers the opportunity to take the front role in their professional nurturing through instructional supervision. Improvement in teachers' professionalism means improved students' learning outcomes and performance (Reigeluth, 2013).

The conceptual framework of this study also considered collegial instructional supervision theory to be key to this research work because of the assumption that its application results in both teachers' professional improvement and students' enhanced academic performance.

Empirical Review

This subsection reviewed empirical research works done by previous researchers in relations to the study. It touched on the particular styles of instructional supervision used in schools; the most used instructional supervision style in schools; challenges of instructional supervision; the effect of instructional supervision on students' academic performance and; the style of instructional supervision which best predict students' academic performance in schools.

Instructional Supervision Styles Used in Schools

Varying research findings have been identified by researchers on the particular style(s) of instructional supervision used by heads of educational institutions. The studies of Rodgers and Jenkins (2010) and Morrison and Wonnacott (2010) respectively identified collegial and clinical instructional supervisions as the most commonly applied styles of supervisions deployed by heads of basic pre-tertiary schools in Mazowieckie in Poland and Hampshire County in England. Gordan and Ross-Gordan (2014) used a survey approach to undertake descriptive research in five (5) pre-tertiary educational institutions in Chile to ascertain the supervisory styles used by the heads of the institutions the rationale behind their choice of such style. Their study revealed among other things that integration of clinical supervision style and collegial style of supervision were common in use by the school's leadership. The study also found that most of the school leadership cited reasons such as the convenience in using those styles and the compatibility of those supervisory style with their leadership approach as the main reasons for using such instructional supervision style.

Similarly, the findings from the study by Isaiah and Isaiah (2014) in Botswana secondary schools showed that majority of the supervisors opted for collegial and developmental supervisory styles because aided them to address the instructional delivery needs of tutors more effectively than the others styles of instructional supervision. Their findings were in agreement with early research work by Ndebele (2013) in four rural districts in Zimbabwe. Ndebele's (2013) investigated into 20 primary schools within some selected districts and interviewed 20 heads of schools and 5 district educational supervisors on their supervisory styles as well as their reasons for choosing

such styles. The study suggested that collaborative and developmental instructional supervision styles were preferred by educational leadership to the other supervisory styles. The reasons underlying their choices were that such instructional supervisory styles aided them to do effective assessment of teachers and offer constructive feedback to teachers about their personal and professional strengths and needs. The foregoing findings were confirmed by the later studies of Moswela and Mphale (2015), and Shah (2017) who equally found clinical and developmental supervision styles to be most preferred and used by school leadership in Botswana and India.

The Most Used Instructional Supervision Style in Schools

Ndebele's (2013) investigated into 20 primary schools within some selected districts and interviewed 20 heads of schools and 5 district educational supervisors on their supervisory styles as well as their reasons for choosing such styles. The study pointed out that collaborative and developmental instructional supervision styles were preferred by educational leadership to the other supervisory styles. The reasons underlying their choices were that such instructional supervisory styles aided them to do effective assessment of teachers and offer constructive feedback to teachers about their personal and professional strengths and needs.

Moswela and Mphale (2015) found clinical and developmental supervision styles to be most preferred and used by school leadership in Botswana. The reasons cited for the choice of developmental and clinical supervision were that these supervisory styles assisted the school leadership to build professional pedagogical capacity of teachers by providing them with

required feedback for improved instructional delivery. Shah (2017) equally found clinical and developmental supervision styles to be most preferred and used by school leadership in India. Similarly, Ibrahim (2013) established that collaborative, also known as clinical and developmental supervision styles were most preferred and used by educational leadership to the other supervisory styles. Gordan and Ross-Gordan (2014) also found developmental instructional supervision style to be most used by supervisors in the selected school. Daresh (2013) opined in his writeup that most Indian elementary schools' leaders prefer and deploy developmental instructional supervision because their focus of supervision is to assist teachers to undergo sustained professional development in their instructional delivery. The author mentioned that teachers' professional instructional development has the potential to boost positive teaching and learning outcome in schools.

Challenges of Instructional Supervision

The study of Charles et al. (2012) in selected elementary schools in Addis Ababa, Ethiopia revealed that Heads of schools and authorities of educational institutions charged with the responsibility of supervising teachers' classroom instruction are confronted with a number of challenges that hinder effectiveness of their work. Some of these challenges found by Charles et al. (2012) include integration of supervisory role with other academic and management responsibilities of school authorities; lack of frequent in-service training of school and instructional supervisors; low level of professional qualification of heads of schools; hostile and uncooperative attitude of teachers towards supervisor; and logistical limitations.

Dipola and Hoy (2013) carried a descriptive-research on challenges of pre-tertiary school headship and school performance. These researchers interviewed 45 heads of high schools in Bangkok and found that the principals and heads of high schools are usually tasked with other many management duties aside the instructional supervisory work. They become torn between these two responsibilities and they are always to balance the two in order to be on top. Ndung'u (2015) sampled the views of 50 educational supervisors on the challenges associated with their duties. These 50 respondents were made up of 15 district school supervisors and 35 heads of primary schools from 5 different remote districts in Kenya. The results of Ndung'u's (2015) research showed that in carrying out their functions, the educational supervisors usually made a trade-off between the instructional supervisory aspect and other administrative duties on daily basis. This therefore poses a serious challenge in achieving effectiveness in their instructional supervisory role.

The respective studies by Nyamwamu (2010) and Mzee (2011) confirmed the assertion that many other administrative and school management tasks of heads educational institutions pose difficulty for them to effectively supervise teachers during instructions in class. Their studies however failed to identify how principals and heads of pre-tertiary schools are able to address this challenge. The respective research by Jared (2011) and Wellington (2011) in Uganda and Lesotho elementary and high schools revealed that heads of schools were challenged in carrying out their instructional supervisory responsibilities by the large number of staff they had to deal with in relation to supervising their instructions. What compounded the challenge, according to Wellington (2011), was the principals' reluctance to

delegate the instructional supervisory role. Jared (2011) also found out that most of the heads of departments in the senior high schools in Lesotho who were responsible for supervising the instruction of their subordinates had teaching responsibilities as well. There was sometimes a conflict between their period of teaching in classroom and the time for supervising the teachers.

Again, De-Grauwe (2007) mentioned in his study that lack of frequent in-service training for the instructional supervisors and inadequate logistics as a serious hurdle to effective instructional supervision in schools. De-Grauwe (2007) equally pointed out that majority of the school principals and authorities of schools in Africa assume their leadership roles without proper training on the various techniques and approaches to supervising teachers' work in classroom. This emanates from the way by which they are entrusted with the leadership in schools; for instance, countries like Kenya, Nigeria and Zimbabwe, the school leadership positions are usually given through automatic promotional appointment to teachers as a result of their long service without proper verification of their competencies and capacities. The individual research works of Abdille (2012) and Comfort et al. (2017) revealed that heads of departments in the Kenya and Nigeria senior high schools do not undergo refresher training programmes on instructional supervision at all for about a year. Abdille (2012) also identified unsatisfactory financial motivation for supervisor as well as logistical issues as some of the challenges bedeviling supervisions in pre-tertiary schools in Kenya.

De-Grauwe (2007) indicated that low professional qualification of some heads of second cycle institution hampers successful instructional supervision in schools. The author is of the view that heads of schools must

have professional qualifications which are higher than or at worst are at par with those of the teachers they supervise. This, he believed, is a prima facie proof of their professional competence in effectively executing their instructional supervisory function. The research works of Watene (2007) and Yunus (2008) in four three different African countries revealed that most of the heads of schools in these countries are appointed to the leadership position via long service without necessarily possessing the requisite higher professional qualification. In some instances, their works identified some teachers having higher professional qualification than the heads of the schools (Watene, 2007; Yunus, 2008). These researchers found this to be a challenge to effective instructional supervision in these schools, although the headmasters may have acquired years of experience through long-service in the teaching profession.

The uncooperativeness and hostility on the part of most teachers towards school and instructional supervision are viewed as a heavy obstacle to school authorities in carrying out their instructional supervisory function (Ndung'u, 2015). According to Gachoya (2008), teachers are always hostile towards supervision generally and more so, towards instructional supervision and therefore, they are bound to be reluctant to seriously accept guidance and support given through the instructional supervision process. The statement is a confirmation of findings of an early study conducted by Adikinyi (2007) which concluded that the contemporary teachers are more than before skeptical about the motive behind instructional supervision by their head teachers and principals based on the past approach of instructional supervision which were used by educational supervisors to harass teachers. As a result,

they do not appreciate the concept and practice of instructional supervision as an avenue or a tool for providing support and guidance for their professional growth and development. They instead still hold on to the initial conception and at any chance will likely to resist it.

Studies by Glanz (2007) and Muriithi (2012) however portray different picture concerning teachers' attitude towards instructional supervision. For instance, Glanz (2007) study identified positive attitude among teachers in Kampala in Uganda pre-tertiary schools towards school and instructional supervision since they believe they were doing the right thing in the classrooms. Muriithi (2012) equally established in his work in Gabon that pre-tertiary school teachers were ever ready to submit their lesson plans and other academic records for inspection. The teachers further believed that supervision helped them to identify areas where they fell short and where improvement was much needed to enhance their pedagogical capacity (Muriithi, 2012). In view of these opposing findings, this research seeks to ascertain whether or not teachers' attitude is a challenge of instructional supervision in the context of schools in the Kwadaso Municipality.

The research work of Gachoya (2008) cited lack of adequate logistical support as one of the challenges that impede school leadership to carry out effective instructional supervision. This was subsequently identified by both Charles et al. (2012) and Ndung'u (2012) in their respective studies as a great obstacle to implementing effectively instructional supervisions in schools by district educational directorates in Uganda and Kenya. This study thus seeks to ascertain if these challenges of instructional supervision also prevail in the selected senior high schools in Kwadaso Municipality.

Influence of Instructional Supervision Practices on Students' Academic Performance

A number of studies have been carried out to assess how instructional supervision affects students' academic achievement. Diverse research findings from these studies have been identified and reviewed below. The work of Sergiovanni and Starratt (2007) found in their study in two elementary schools in Bhola, Bangladesh that among other factors, instructional supervision practices of basic school head teachers led to improved instructional delivery process and pupils' performance. Sergiovanni and Starratt's (2007) research deployed a descriptive study and used 65 teachers in the selected elementary schools as their sample size. It did not use regression model to establish relationship between instructional supervision and students' academic performance, thereby creating a research gap for this study to be commissioned. Similarly, Tesfaw and Hofman (2014) carried out a study in Finland—Lapland Municipality—using three elementary educational institutions as their study area. The research work which was descriptive survey sampled opinions of 75 teachers and school supervisors. It was established in Tesfaw and Hofman's (2014) study that instructional supervision had positive influence on the professional development of teachers and the ultimate result is an improvement on the performance of students.

Institutional differences as well as geographical disparities opened up research vacuum for this study to be carried out using correlational research methodology. In Nigeria, Dangara (2015) commissioned a study to examine how instructional supervision affected the teachers' pedagogical responsibility in senior high schools in Taraba State. His research result concluded that

principals' instructional supervision practices such as checking of teachers' lesson attendance and classroom visitation strongly influenced how the teachers perform their pedagogical duties and eventually impacted on students' learning outcomes. The main focus of Dangara's (2015) research was not to necessarily assess how instructional supervision correlated students' academic performance but to assess how instructional supervision impacted on teachers' pedagogical duties. This therefore created a research gap for this study to be carried out to assess the how instructional supervision correlate students' academic performance.

Ndung'u (2015) sought to find out how the supervisory role of head teachers in Kirinyaga Central Sub-County primary schools related with the pupils' academic participation and achievement in Kenya basic educational subsector. The study used 50 pupils and 3 head teachers from three basic schools as its sample size. The researcher reported in his work that a strong positive correlation existed between pupils' academic achievements and the head teachers' instructional supervision practices such as scheme of work and lesson plans inspections, checking of teachers' class attendance as well classroom visitation. The research work of Ndung'u (2015) was carried out in lower academic institutions than those used by this study. Moreover, geographical differences and differences in institutional conditions offered an opportunity for further research work to be conducted and, this study attempted to fill these research gaps.

Again, in Nigeria, Sule et al. (2012) investigated the nature of influence that basic schools' head teachers' classroom visitation and inspection had on the job performance of teachers. Their study was conducted

in 3 junior secondary schools with 45 respondents made up of 3 head teachers and 42 teachers constituted the sample size of their study. It was established that teachers' classroom instructional delivery was positively influenced by head teachers' classroom visitation and lesson inspections. By these findings, Sule et al. (2012) concluded such enhancement of teachers' instructional delivery translated into improved pupils' academic output. This was a confirmation of earlier findings of the study by Onyango (2005) whose research work equally reported that head teachers' classroom visitation, instructional observation and post observation conferences bolstered teachers' instructional delivery capacity and students' learning outcome. The respective research works of Sule et al. (2012) and Onyango (2005) were not mainly carried out to ascertain the relationship between instructional supervision and students' academic performance, thereby providing a research avenue to for this study to be commissioned.

Gachoya (2008) carried out a study in North Korea pre-tertiary schools to examine how school supervisors' work assists in achieving quality education within national education framework. The methodology of Gachoya's (2008) study was both descriptive and correlational and the sample size was 200 respondents made up of 50 school supervisors and teachers and 150 students selected from three different elementary schools. It was observed from this study that schools' supervisors' efforts enabled them to gain better understanding of the real situation of instructions given to the pupils and students by the teachers. They consequently help teachers to improve on their instructional delivery skills. Again, the study also revealed that teachers' awareness of their supervisors' frequent visitation to class and observation of

lessons made them to double their efforts to improve on their teaching approaches. Students were regular and punctual in class and they also paid attention lesson because of the frequent presence of school supervisors in their class. The study therefore concluded that a strong positive correlation was identified between instructional supervisory practices of school supervisors and the students' academic performance (Gachoya, 2008).

Similar correlational study of Alimi and Akinfolarin (2012) in Nigeria secondary schools using 150 sample size confirmed the findings of Gachoya (2008). The work of Alimi and Akinfolarin (2012) however provided additional revelation regarding how some selected instructional supervisory practices by secondary school principals affected students' academic achievements. The researchers concluded in their work that checking of teacher' punctuality and regularity in class for lessons, frequent classroom observation and visitation as well as examination questions and marking schemes moderation by the schools' principals strongly and positively correlated with students' academic performance in the selected senior high schools in Lagos. These findings had been subsequently confirmed by other researchers such as Okendu (2012) and Heaven and Bourne (2016) who replicated the study in different states in Nigeria. Although all these studies were correlational in nature, the differences in the geographical setting and passage of time necessitated replication of similar study in Ghana which this research work attempted to do.

On the other hand, Tyagi (2010) could not established any positive correlation between principals' instructional supervision practices and students' academic performance in high schools in Southern India. Similarly,

Veloo, Komuji and Khalid (2013) concluded in their study that although students' academic performance in some senior high schools in the United Arab Emirate was generally creditable, such performance could not be attributed to school principals' effectiveness in their instructional supervision. Truly, the respective research works by Tyagi (2010) and Veloo et al. (2013) were correlational in nature and were carried out in high schools, the passage of time as well as geographical differences created a research gap for replication of similar study in Ghana; this research work thus sought to contribute in filling this research gap. Again, Comfort et al. (2012) indicated in their descriptive study in three primary schools in Uganda that although head teachers in most rural community schools demonstrated effectiveness in their instructional supervisory roles, the academic performance in these school were generally poor. These students' poor performance was blamed on students' parents' disinterest in formal education and inadequate teaching and learning materials. Clearly, Comfort et.al.'s (2012) study used lower academic institution than it is used in this study. Furthermore, their different research approach and distinct research purpose as well as geographical differences in the research setting gave a room for this study to be conducted.

Abdinoor (2013) sought to know the instructional supervision style used by heads of basic schools in Isiolo County in Kenya and how it impacted on schools' academic work. The study pointed out that clinical instructional supervision was most common among the heads and had significant effect on teaching and learning in the selected schools. The studies of Akinwumi, (2016) in Kaduna five secondary school in Kaduna revealed that clinical supervision style had the highest positive influence on students' academic

performance compared with collegial supervision. Similarly, Aaronson et al. (2017) et al established that clinical supervision style best drove students' academic achievement compared with developmental and collegial supervision. They further found that instructional supervision statistically influenced students' academic performance by 20 percent and this was accounted to be significant. Selio (2011), Wawira (2012) and Reigeluth (2013) respective indicated that collegial supervision has the most positive influence on students' academic performance in basic and second cycle schools compared with other styles of supervision. The study of Selio (2011) revealed that instructional supervision accounted for 22 percent of factors that determined special students' academic performance. Wawira (2012) and Reigeluth (2013) also pointed out that instructional supervision could statistically influence students' performance in their examination score by up to 21 percent and 23 percent respectively. On the contrary, Ibrahim (2013) established in his study in selected secondary schools that developmental supervision had the most positive influence on students' academic performance compared with collegial supervision style. The researcher further established that the combined effect of instructional supervision on determining students' academic grades was 19 percent. He therefore recommended that school leadership should pay due attention to supervision of classroom work to help improve students' performance academically.

Shah (2017) also revealed that instructional supervision statistically had 18 percent effect on students' ability to pass their examination. He thus admonished high school leadership to pay special attention to their instructional supervision duties. All the above cited studies although looked at

instructional supervision in schools and its influence on students' academic performance, they were carried out in different geographic and time settings with their distinct administrative policies and set-ups. Therefore, the differences in time and geographic environments create a vacuum for and replicatory and further studies. And this study sought to fill this gap.

Instructional Supervision Styles that Best Predicts Students' Academic Performance

The study of Ibrahim (2013) further established that developmental supervision had the most positive influence on students' academic performance compared with collegial supervision style. On the other hand, the study of Akinwumi (2016) revealed that clinical supervision style had the highest positive influence on students' academic performance compared with collegial supervision. Similarly, Aaronson et al. (2017) et al. established that clinical supervision style best drove students' academic achievement compared with developmental and collegial supervision. stronger effect on students' learning outcome compared with other supervision styles. Willegems et al. (2017) concluded in their research that collaborative (clinical) instructional supervision, compared with developmental supervision style, had stronger influence on teaching and learning outcome as it tended to improve on teachers' pedagogical skill in the areas of classroom delivery. The study further suggested that collaborative supervision style provides the right feedback to the professional teacher to be more reflective on his/her teaching approach, making the teacher to be more student-centred in his instructional strategy. The results of the study by Kemmis et al. (2014) equally corroborate had also revealed earlier that clinical supervision, as against collegial

supervision, best influenced students learning achievement. The results further pointed out that clinical supervision style facilitates teachers' self-development professionally and this had a ripple effect on students' academic achievement (Kemmis et al., 2014). This finding is harmony with the finding made by Higgins et al. (2018) which indicated that clinical supervision, in comparison with collegial supervision had the most powerful influence on the academic performance of students. Their study emphasized the need for school leadership to promote clinical instructional supervision in order to help teacher to continually improve in their classroom delivery.

On the other hand, Reigeluth (2013) found that collegial supervision had the most positive influence on students' academic performance in basic and second cycle schools compared with other styles of supervision. Geographical and institutional differences might have accounted for the disparities in the findings between this research and those of the aforementioned prior studies. Study of Argina et al. (2017) in Indonesia suggested that collegial and developmental supervision had the most statistically significant influence on students' academic performance. Wiyono et al. (2017) also found in their study in India that developmental supervision best drove students' performance academically.

Gender Differences in Academic Performance

Gender differences in intellectual ability as well as academic performance has attracted a debate across academia. Cultural definition of the role of male and female in the society and their respective physiological disparities have led to the belief that there is always a difference between male

and female even in their academic performance in school (Hamre & Pianta, 2011). A number of studies have been conducted by different researchers on this topic and diverse findings have been made. Some of these studies revealed influences of school factors such as instructional management and teachers' instructional approach on gender differences in academic performance. Others do not find any significant gender difference in academic performance influenced by instructional management pedagogical approach of teachers. The study of Slavin (2010) mentioned that differences exist among male and females in their academic performance due largely to the experiences most cultures expose each of them to. The natural expectations among most cultures in the world suppose that males are more intelligent than females and so they perform better than females academically (Slavin, 2010). Afuwape and Oludipe (2013) found in their study that male students were better in their performance in Integrated Science subject than their female counterparts in Colleges of Education in Nigeria. The study mentioned that teachers' pedagogical techniques and instructional management had statistically moderate influence on the differences in academic performance between male and female students.

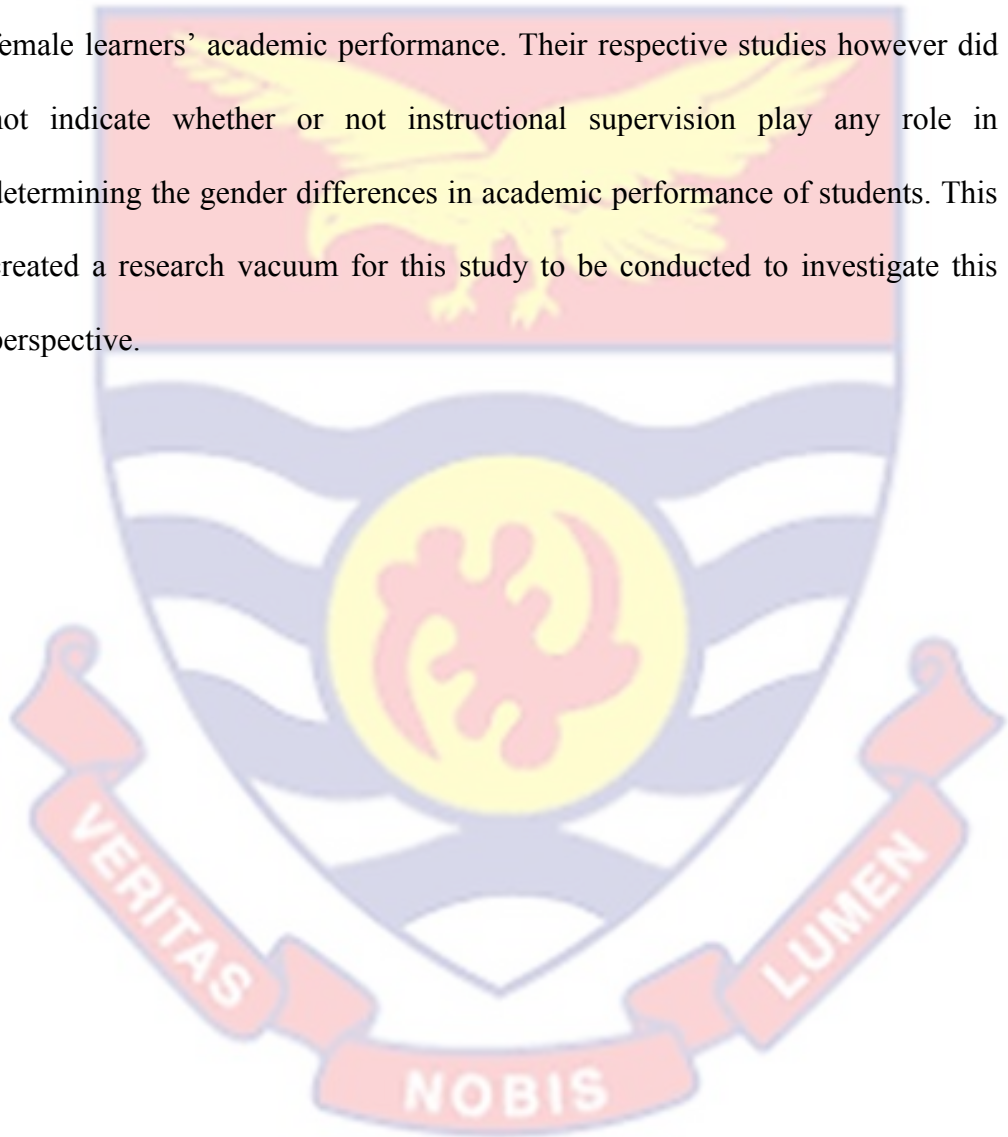
Mari (2013) similarly concluded that male science students outperformed the female science students in Biology subject in Senior Secondary Schools in Zaria state in Nigeria. The researcher attributed the differences partly to differences in socialization experiences to which males and females are exposed during their early life by the African culture. The study by Akiri and Ugborugbo (2012) in Senior Secondary Schools in Mali established that boys were way ahead of girls in their academic achievement.

The study further pointed out that the performance distinction between the two sexes could be partly traced to the differences in experiences and learning opportunities each gender is provided by the African culture. According to Akiri and Ugborugbo (2012), the African culture favours boys more than girls in terms of schooling and this incentivizes boys to do better in school than girls. Malik and Ibu (2013) equally revealed in their joint study in Nigeria that Junior High School boys perform better in Mathematics and Science than girls.

On the other hand, Were and Yalo (2012), in their study in Kenya, found girls in basic schools perform better than boys, especially in English Language. The study, however, did not mention instructional supervision to have any role in driving the differences in gender performance in school. The study of Brown and Kanyango (2014) in Germany which assessed gender differences in Mathematics Performance confirmed the findings made by Were and Yalo (2012). Brown and Kanyango (2014) reported that girls outperformed the boys in Mathematics in relations to their mean scores. The study did not establish any link between instructional supervision or instructional management and the gender difference in performance. The respective studies of Nuthanap (2015) and Balarabe and Abdullahi (2016) did not find any significant difference in the academic performance of male and female students. Balarabe and Abdullahi (2016) indicated that the finding may be as a result of provision of equal learning opportunity to both genders, emanating from socio-cultural and educational civilization. Instructional supervision was not mentioned to have any role in determining the gender differences in academic achievements. The respective studies of Okendu

(2012) and Heaven and Bourne (2016) also did not identify influence of instructional supervision on the difference in performance between male and female students in high school.

From the above studies reviewed, it is clear that diverse results have been produced by different researchers on the issue of differences in male and female learners' academic performance. Their respective studies however did not indicate whether or not instructional supervision play any role in determining the gender differences in academic performance of students. This created a research vacuum for this study to be conducted to investigate this perspective.





CHAPTER THREE

RESEARCH METHODS

Overview

This chapter contains a discussion of the methodology used to achieve the research objectives and to answer the research questions posed in this study. The discussions here have been carried out under the following subthemes: research design; the study area; population; sample and sampling procedure; research instruments such as sources of data for the study and data collection instruments; ethical issues procedure for data processing and analysis, and chapter summary.

Research Design

In view of the specific research questions and the hypothesis to be tested, this study employed descriptive research design. A descriptive research design, according to Creswell (2013), gathers and analyses data, displays the results in tabular or chart form, and describes the unique features of the sampled participants from the population under study. It does not demonstrate any cause and effect among the variables or constructs (Creswell, 2013). For this reason, descriptive research was rightly used for the achievement of the specific research purposes one to three since these

purposes sought to describe the style of instructional supervision in use in the selected SHS, the potential challenges associated with those styles of instructional supervision in the selected schools, and the influence that the styles of instructional supervision being used in the schools have on the students' academic performance.

The descriptive design is not devoid of its own shortcomings. There is a problem of not being able to ask probing questions and seeking clarifications with the use of the structured or close ended questionnaires as data collecting instrument.

Study Area (The Profile of Kwadaso Municipality).

Kwadaso Municipality is located in the Ashanti region of Ghana. It was formally part of the Kumasi Metropolitan Assembly until 2018 when it was demarcated and accorded the status of Municipality. The Municipality has an estimated population of 311,242 people based on the projected growth rate of 3.2% of the 2010 Ghana's Population and Housing Census. The male population was 143,761 and that of the females was 167, 481 at the time of this study. The Municipality shares boundaries with Atwima Nwabiagya District to the North-west, Bantama Sub-Metro to the North-East, Kumasi Metropolis to the East, Nhyiaso Sub-Metro to the South-East and Atwinwa Kwanwoma District to the south West. Kwadaso Municipality is made up of 15 towns put into 3 zonal councils which include Kwadaso, Asuoyeboa and Tanoso. The Municipality has 72 primary school, six public primary schools and 46 private primary schools; 19 junior high schools (made up of 13 public and 6 private schools); four Senior High schools and two public tertiary institutions. The total enrolment in the primary school for 2019/2020

academic year stood at 18, 274, that of the Junior high school was 9, 025 whilst the total enrolment for the Senior High School for the same period was 5, 632. Therefore, the total students’ population of pre-tertiary schools is 32, 931. Teachers’ population for the pre-tertiary schools was 1,314, consisting of 683 males and 631 females (Municipal Composite Budget, 2020).

School Name	Total Staff & Staff Students Population	Staff Population	Students Population
Prempeh College	3,674	254	3,420
Yaa Asantewaa SHS	3,374	232	3,142
AG SHS	848	134	714
Total	7,896	620	7,276

Population of the Study

The target population for this study was made up of all the teachers, supervisory staff and the students in four Senior High Schools in the Kwadaso Municipality. Numerically, the total target population is 9,753 composed of 9,011 students and 742 teachers in the Senior High Schools in the Kwadaso Municipality (Kwadaso Municipal Composite Budget Manual, 2021).

Accessible population on the other hand was made up of the assistant headmasters-academics, heads of department, the teaching staff and the students of three selected schools in Kwadaso Municipality. Table 2 shows numerical population distribution among the three selected SHSs from the Kwadaso Municipality.

Table 2 Population Distribution Among the Three SHSs in Kwadaso

Source: Kwadaso Municipal Education Directorate EMIS, (2021)

Again, in Kwadaso Municipality, there are four Senior High Schools namely, Prempeh College, Yaa Asantewaa Girls Senior High School, Agric

Nzema Senior High School and, Assemblies of God Senior High School. According to the Ghana Education Service Senior High Schools Classifications, Prempeh College and Yaa Asantewaa Girls Senior High School falls into Category 'A' Schools (Ghana Education Service [GES] SHSs Classification Manual, 2019). This means that these schools' performance and infrastructure are of excellent quality. The Assemblies of God Senior High School and Agric Nzema Senior High School fall into grade 'C' schools, meaning the schools have relatively low-quality performance and infrastructure (GES SHSs Classification Manual, 2019). The researcher chose two schools from category 'A' school and a school from category 'C' schools of the SHSs in the Kwadaso Municipality in order to obtain a fair result from the study. Again, Agric Nzema SHS was excluded from this study because it was recently established (established in 2017) has produced only one batch of students with West Africa Senior Secondary School Certificate Examinations (WASSSCE) result. This means that a three-year trend observation of their WASSSCE results could not be done to ascertain improvement or otherwise of their results.

Sample and Sampling Procedure

The overall sample size selected from the accessible population was determined using population and sample size determination table of Krejcie and Morgan (as cited in Kothari, 2014). From the table of Krejcie and Morgan, a sample size of 236 respondents were obtained from the staff population of 620 (made up of 200 teaching staff and 30 supervisory staff) whilst 367 sample size was also obtained from the students' population of 7,276. In summary, the overall sample size for the study was 603 respondents, made up

236 academic staff and 367 students of the three selected SHSs in the Kwadaso Municipality.

The sampling technique has been displayed in tables 3, 4 and 5, showing distribution across the supervisory staff, the teaching staff and the students.

School Name	Staff Population	Sample Calculation	Sample Size
Prempeh College	254	$\frac{236}{620} \times 254$	97
Yaa Asantewaa SHS	232	$\frac{236}{620} \times 232$	88
AG SHS	134	$\frac{236}{620} \times 134$	51
Total	620		236

Table 3 Sample Size Distribution of the Staff of the Selected SHSs in

Kwadaso

Source: Field Data, (2021)

The sampling techniques used in selecting the staff of the chosen schools were stratified random sampling, and purposive sampling. The stratified random sampling technique was initially applied to obtain the proportionate distribution of the sampled staff across the selected schools to ensure fair representation. After using Krejcie and Morgan’s table to determine the sample size of 236 staff from the staff population, stratified random sampling technique was applied to distribute this sample across the three selected SHSs. In line with the following formula by Adams, Margaret and Katherine (2021), stratified random sampling technique was applied.

$$S = \frac{\text{sample}}{\text{population}} \times \text{stratum}$$

S represents the staff sample required from each stratum (school).

The sample refers to the total staff sample size from all the three selected SHSs. Stratum refers to the staff population from each SHS. The formula was applied, as seen from table 3, by dividing the staff sample size required for this study by the entire population of the staff, and the result was multiplied by the staff population of each school (See Table 3). After, simple random sampling technique specifically the lottery method was adopted and employed in this research to ensure that each member of the staff gets an equal chance of being selected.

Purposive sampling technique was later used for selecting all the 30 instructional supervisory staff of the schools since they perform the instructional supervisory functions and could furnish the required responses to the questions concerning the style of instructional supervision they apply in their respective lines of duty. The purposive sampling was applied in the selection of only the core-subject teachers since the students' tests results analysed for this study were those from their core subjects.

Table 4 shows the sampling technique used in selecting the students from three selected Senior High Schools in the Kwadaso Municipality for this study.

Table 4: Sample Size Distribution of students Across the Three Selected SHSs

School Name	Students Population	Sample Calculation	Sample Size
Prempeh College	3,420	$\frac{367}{7,276} \times 3,420$	173
Yaa Asantewaa Girls SHS	3,140	$\frac{3,67}{7,276} \times 3,140$	158
AG SHS	714	$\frac{367}{7,276} \times 714$	36
Total	7,276		367

Source: Field Data, (2021)

From table 4, the sample size of the students was distributed across the three senior high schools, using stratified random sampling technique. This was also to ensure fair representation of each school in the overall sample size. In line with the following formula by Adams, Margaret and Katherine (2021), stratified random sampling technique was applied.

$$S = \frac{\text{sample}}{\text{population}} \times \text{stratum}$$

S represents the students sample required from each stratum (SHS).

The sample refers to the total student sample size from all the three selected SHSs.

Stratum refers to the students' population from each SHS.

In applying the stratified sampling technique, the required total student sample size (367) determined using Krejcie and Morgan's sample table was first divided by the sum of the total students' population of the three SHSs. The result was then multiplied by the population of each of the selected SHSs (See Table 4). Sample frame for each school was then generated. Afterwards, systematic sampling technique was applied in selecting the students for each school to represent their sample size. In applying the systematic sampling technique, the total students' population of each SHS was divided by the sample size of that SHS. For instance, systematic sampling technique was applied in selecting the students from Prempeh College using this approach;

$$\frac{3,420}{176} = 20^{\text{th}}$$

Each 20th person was chosen from the students' total population of 3,420. This same technique used was repeated across all the three selected SHSs to sample the students for each school.

Table 5 shows the summary of the sample distribution of staff and teachers across the three selected SHSs in the Kwadaso Municipality.

Table 5: *Summary of Sample size distribution*

Name of School	Staff Sample Size	Students' Sample Size	Total Sample size
Prempeh College	97	172	269
Yaa Asantewaa Girls SHS	88	159	247
AG SHS	51	36	87
Total	236	367	603

Source: *Field Data, (2021)*

In summary, stratified random and purposive sampling techniques were used in selecting the staff of the selected SHSs in the Kwadaso Municipality for this study. Additionally, stratified random and systematic sampling techniques were used in selecting the students from the three selected SHSs in Kwadaso Municipality. The respective responses of the supervisory staff and the teaching staff were gathered on the types of instructional supervision in use and how these instructional supervision type affect the students' academic performance in Yaa Asantewaa Girls Senior High School, Assemblies of God Senior High School and Prempeh College.

Research Instruments

Questionnaire and tests were the main data collection instrument used in collecting the views of the supervisory staff, the teaching staff and the sampled students of the selected Senior High Schools for this study.

Two sets of questionnaires were designed and administered to the selected Senior High Schools' supervisory staff and the teaching staff. The first questionnaire was given to the supervisory staff of the selected schools to solicit their views on the style of instructional supervision in use in the school

and the potential challenges associated with each of them. The second set of questionnaires was given to the teachers to also provide confirmatory information on the style of instructional supervision being used by their supervisors. This was necessary to receive balanced views on the type/style of instructional supervision being used in the school. However, the students' performance was measured by using the results of a test conducted for the SHS 3 students. Moreover, the results of the tests for the four core subjects, namely, English Language, Mathematics, Integrated Science and Social Studies were used to measure students' academic performance.

The questionnaire was adopted from the Instructional Supervision Standard, Procedures and Tools (ISSPAT) guide—module 4 and 6—prepared by International Institute for Educational Planning (IIEP) of the UNESCO (2008) for pre-tertiary school administrators and principals. The ISSPAT guide was adopted for this study because the content covers a wide spectrum of the areas of concern regarding instructional supervision; the ISSPAT module 4 and 6 have a comprehensive coverage for clinical instructional supervision, collaborative instructional supervision and developmental instructional supervision which were analysed in this study. Again, the guide has been consistently applied, revised and proven to be universally effective across the developed and the developing countries educational system. The ISSPAT guide module 4 and 6 originally is made up of 26 closed ended question items with Chronbach alpha value of 0.84. Twenty-three (23) out of the 26 question items from the ISSPAT pitched on a 4-point Lickert scale ranging from '1-strongly agreed' to '4-strongly disagreed' were adopted for this study. According to the ISSPAT guide scale, a mean score of 2.5 to 4

means the respondents strongly agree to the construct being measured whilst 2.4 and below indicates the respondents' disagreement to the construct measured. These question items were adopted because their content directly reflects this study's research purposes as well as the constructs measured in the areas of instructional supervision and its expected outcome.

Each set of questionnaires issued was divided into sections. Questionnaire for the schools' supervisory staff was divided into three sections tagged 'Section' A, B and C. The 'Section A' covered the demographic information of the respondents, the 'Section B' had questions on the style of instructional supervision being used by the supervisors and the 'Section C' contained questionnaire on the potential challenges associated with the type of instructional supervision being used in the schools. Similarly, the questionnaire for the teachers had two sections: the 'Section A' also contained demographic information of the respondents, and the 'Section B' consists of questions on the style of instructional supervision in use in the school. The questionnaires comprised strictly closed-ended questions for convenience in answering and they were designed on a Lickert Scale of four points each ranging from 'Strongly Agree' to 'Strongly Disagree.' The respondents had the option of selecting from among the alternative provided for convenience and for beating time. Copies of these questionnaires can be found in appendix A and B.

Tests covering the four core subjects, namely, English Language, Core Mathematics, Core Science and Social Studies were conducted for the sampled SHS 3 students from the three selected SHSs. The tests consisted of 20 multiple choice/Objective question items. Specialists were contacted to set

these questions. The tests were conducted within one week and the students' scripts were marked and graded within three days. The results were graded from 'A1' to 'F9' based on the West Africa Examination Council (WAEC) grading scale for Senior High Schools' examinations. Copies of these tests are found in appendices C, D, E and F.

Pre-testing of Questionnaire

To ensure correctness of the question items in the questionnaire, the study rolled out a pre-test. The questionnaire was pre-tested in Asanteman Senior High School using 1 assistant headmaster, 4 heads of department and 45 teachers. The school was chosen for the pre-test of the research instruments because it had the same characteristics as the rest of the selected schools for this study. In all, 50 questionnaires were administered to participants to respond to and pass comment where necessary for corrections and revision to eliminate ambiguity in the question items. Finally, the corrected and revised questionnaire were produced for actual administration for data collection.

Validity and Reliability of Research Instrument

Research instrument reliability and validity depend on how it is structured and designed, according to Mimi, Nor, Lai and Kahirool (2015). When a research instrument has proper design and structure with the potency to generate data that are valid and reliable, it is able to guide the study to draw from the respondents' responses that are objective and accurate (Noble & Smith, 2015). The ability of the research instrument to honestly and precisely measure what it is intended to measure is referred to as validity (Mimi et al., 2015). To achieve content and construct validity, the researcher designed the questionnaire by adapting the Instructional Supervision Standard, Procedures

and Tools (ISSPAT) guide, module 4 and 6, prepared by International Institute for Educational Planning (IIEP) of the UNESCO (2008) for pre-tertiary school administrators and principals. The ISSPAT guide was adopted and adapted for this study because the content covers a wide spectrum of the areas of concern regarding instructional supervision. Again, the guide has been consistently applied, revised and proven to be universally effective across the developed and the developing countries educational system. As such, the content of the ISSPAT reflects this study's research purposes as well as the constructs measured in the areas of instructional supervision and its expected outcome. Moreover, the supervisor who is an expert reviewed the questionnaire to ensure they were valid before they were fully administered.

A research instrument is said to be reliable when it is able to consistently generate the same results when applied repeatedly at different times to similar objects with same characteristics (Apple & Sundar, 2016). The extent to which the research instrument is able to consistently measure what it is meant to measure describes reliability of a research instrument (Creswell & Guetterman, 2019). When the research instrument is reliable, it brings forth same results repeatedly in the course of data collection (Klenken et al. 2016). In terms of statistical approach, the questionnaires were subjected to pre-testing. The research instrument was pretested in Kumasi Senior High Technical School which has similarities with the three selected SHSs and the responses received helped to make the needed revisions. The questionnaires pretested were measured for their reliability with the help of Cronbach alpha analysis model. The Cronbach alpha Coefficient values for the supervisors' questionnaire stood at 0.77 and that of the teachers was 0.75. According to

Taber (2018), a research instrument passes to be reliable when its Cronbach alpha coefficient value is greater than or equal to 0.70. Thus, it is reliable enough to elicit the intended responses for valid analysis. Given the fact that all the Cronbach alpha coefficient values obtained for the three sets of questionnaires pre-tried exceeded the floor value of the model (0.70), it was fair to conclude that this research instruments were reliable.

Data Collection Procedure

The primary data collection processes of this research took into account ethical dimension of research. Prior to the primary data collection, the researcher secured from the University of Cape Coast's Institutional Review Board (UCCIRB) a clearance letter showing its approval of this study. Additionally, an introductory letter was secured from the department of Educational Psychology and was forwarded to the management of the selected Senior High Schools in Kwadaso Municipality to seek their permission to embark on the research in the institutions. After obtaining their responses approving of this study, the full-scale questionnaire administration commenced. Again, before the questionnaire were given to the schools' staff, the researcher held consultation with them to receive their consent.

Each of the respondents were assured of their anonymity and confidentiality of the information they provided as their responses to the questionnaires. They were also told that all the pieces of information they provided were strictly for academic purposes and nothing more than that. Because of the COVID19 pandemic and its associated restrictions on

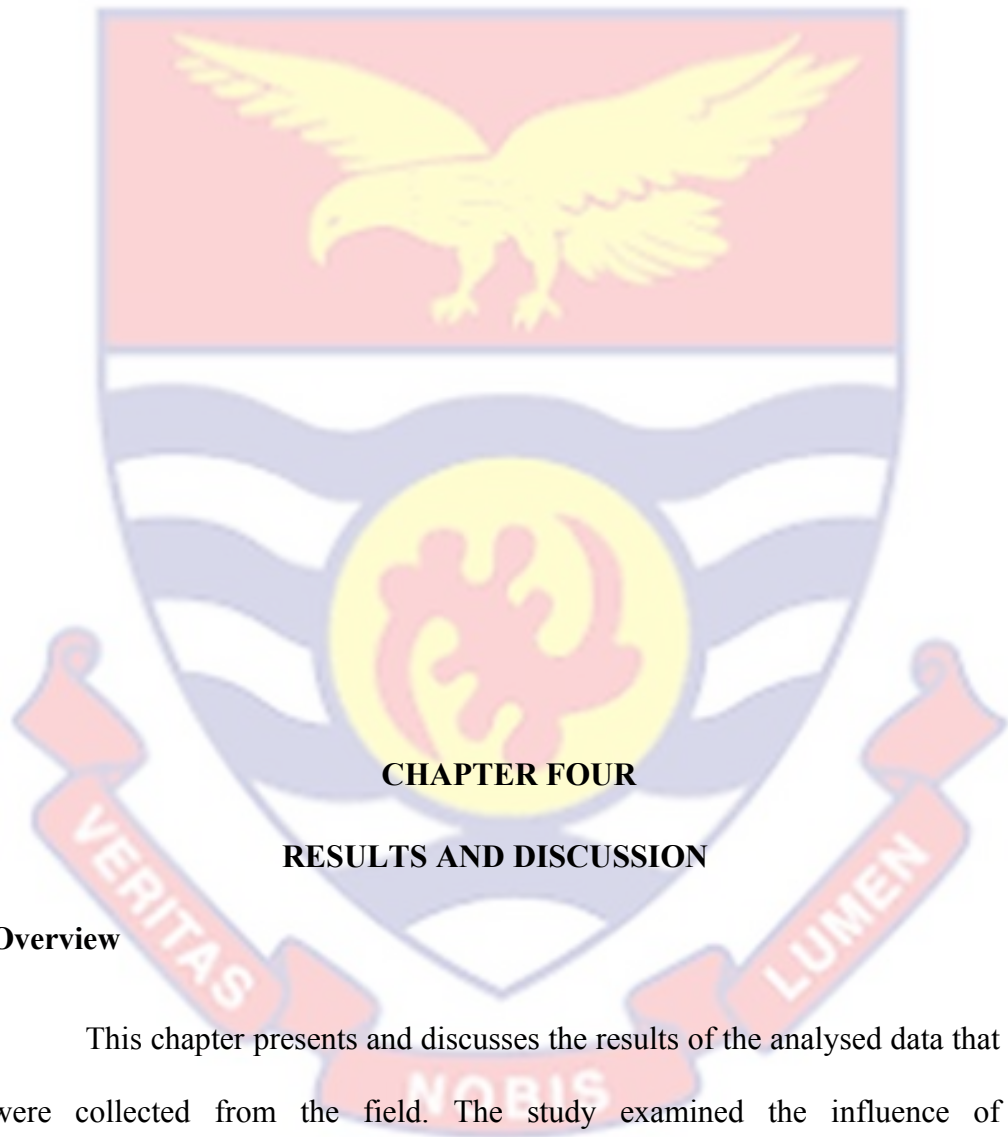
movement to and from all academic institutions, the researcher could not personally administer the questionnaires meant for the teachers. The teachers' questionnaires were given to some of the tutors to administer on the researcher's behalf and the answered questionnaires were returned through the same process. However, the questionnaires for the assistant headmasters in charge of academics of the school were administered in person by the researcher based on their schedule for appointment. In all, the primary data collection duration was 16 days. Again, experts were contacted to set standardized objective test questions for the four Core Subjects—English Language, Core Mathematics, Core Science and Social Studies. The tests consisted of 20 objective question items for each subject. The tests were administered to the sampled students in the three selected SHSs within week period and the results were used as indicators of the students' academic performance. Permission was secured from the administrative authority of the schools and through an official letter written by the researcher for that purpose.

Data Analysis Procedure

The primary data collected were edited, coded and uploaded into the Statistical Package for the Social Sciences (SPSS) software (version 16) and were analysed with the help of the descriptive statistical component of the SPSS. The results which were in the form of descriptive statistics such as mean and standard deviation were presented in tables. The data for the students' academic performance represented by the SHS 3 students' tests results of the three selected SHS were obtained and sorted into their grading

scale from A1, represented by 1, to F9 represented by 9. They were then coded and uploaded electronically into the SPSS software.

Data collected on research question one two and three were analysed using mean and standard deviation. This is because it allows for the objective measure of opinion or subjective data and provide basis for comparison through the use of the Likert scale. Similarly, data gathered on research question four and five were analysed using multiple regression model of SPSS (version 16). Multiple regression statistical model was used to analyze the data gathered on research question four and five to determine the influence of instructional role of supervisors' on students' academic performance. Multiple regression was appropriate because three variables namely; Clinical, Collegial and Developmental instructional supervision was used to predict their influence on students' performance. The data on the first hypothesis were tested using ANOVA and Tukey post hoc analysis tool to determine the differences in the academic performance of students across the three schools. Lastly, data on the second hypothesis were also tested using independent t-test to examine the difference in performance between male and female students in the selected SHSs. The results were discussed in narratives according to the research questions and the hypothesis.



CHAPTER FOUR

RESULTS AND DISCUSSION

Overview

This chapter presents and discusses the results of the analysed data that were collected from the field. The study examined the influence of instructional role of supervisors' on students' academic performance in selected SHSs in the Kwadaso Municipality. Specifically, the following research purposes were formulated to guide the study: find out the style of instructional supervision used in the selected SHSs in the Kwadaso Municipality; to find out which of the instructional supervision styles is most

used in the selected SHSs in Kwadaso Municipality; discover the challenges associated with implementing such instructional supervision if any in the selected SHSs in the Kwadaso Municipality; find out the influence instructional supervision practices have on the students' academic performance in the selected SHSs in the Kwadaso Municipality; determine which of the instructional supervision styles best

predicts students' academic performance in the selected SHSs in Kwadaso Municipality. A sample of 603 academic staff and students were drawn from a population of 7,276 staff and students, and their responses and test results were collected and analysed. Descriptive and inferential statistical tools (multiple linear regression model, to be precise) were used to analyze the primary data collected. The results were displayed in frequencies, percentages, mean, composite indices. The presentation and discussion of data analyzed in this chapter began with the demographic background of the respondents as seen below.

Analysis of Demographic Background of Respondents

This subsection presented the analysis of data collected from the field regarding the demographic background of the respondents.

Response Rate to the Questionnaire

A total of 236 questionnaires were administered to the respondents and 228 of them were answered and received from the respondents. This means that the return rate was 96.6 percent which is above the minimum acceptable rate suggested by Muanga and Muanga (2009) for research analysis and generalization.

Demographic Characteristics of the Respondents

This section provides the demographic characteristics of the respondents. The demographics discussed include the age, gender, educational level, and working experience of the respondents. The results are represented in tables 6 and 7.

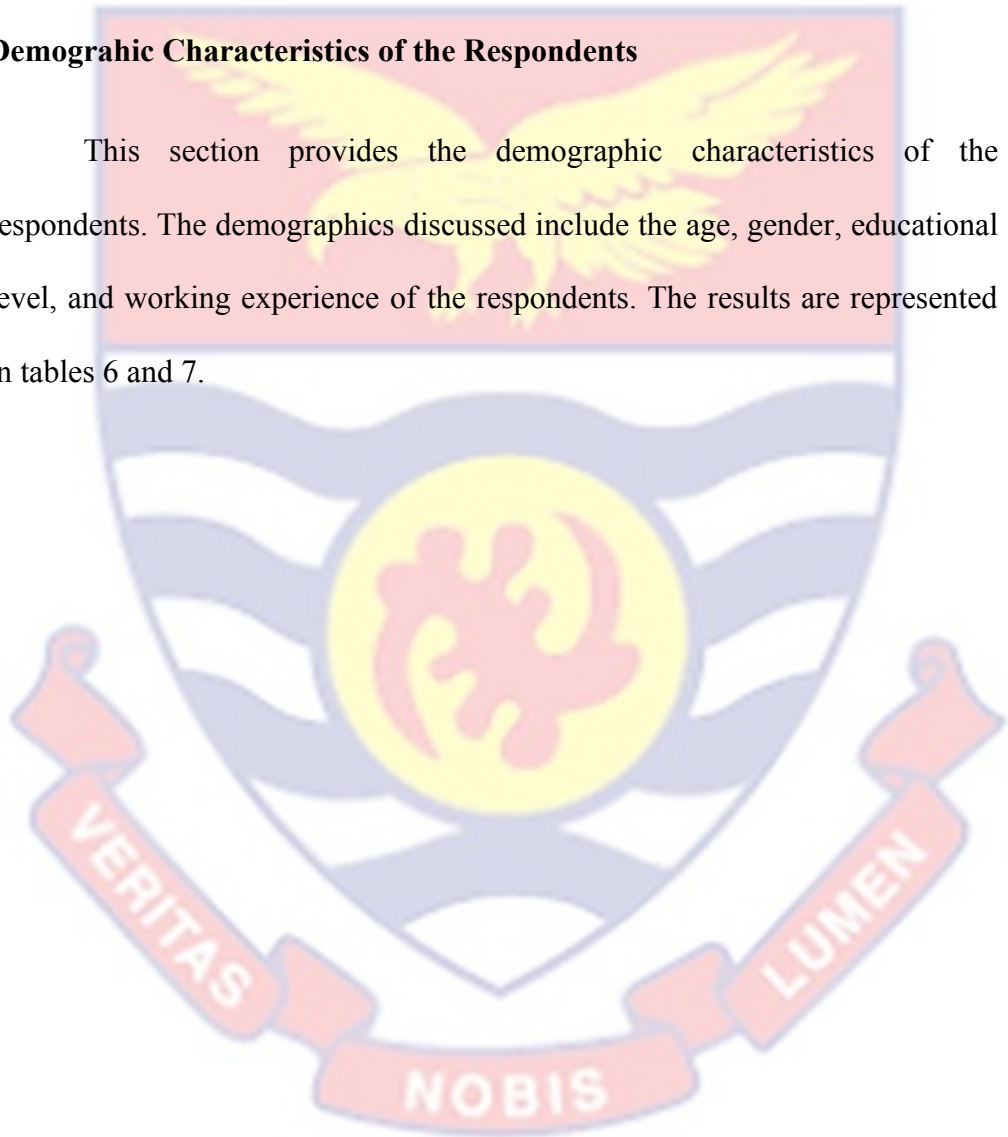


Table 6: *Demographic Characteristics of Teachers*

	Frequency	Percent
Age		
30-35	37	18.5
36-40	60	30.0
41-50	76	38.0
51 and above	<u>27</u>	<u>13.5</u>
Total	<u>200</u>	<u>100</u>

Gender		
Males	123	61.5
Females	<u>77</u>	<u>38.5</u>
Total	<u>200</u>	<u>100</u>

Educational Qualification		
First degree (non-professional)	2	1.0
First degree (professional)	152	76.0
Post graduate (professional)	<u>46</u>	<u>23.0</u>
Total	<u>200</u>	<u>100</u>

Working Experience		
16-20 year	63	31.5
1-5 years	50	25
11-15 years	38	19
6-10 years	29	14.5
Above 20 years	<u>20</u>	<u>10.0</u>
Total	<u>200</u>	<u>100</u>

Source: field survey (2021)

Age of Respondents

The results in Table 6 show that (37) representing 18.5 percent of the respondents in the selected schools were between the ages of 30 and 35 years whilst (60) representing 30 percent had ages between 36 and 40 years. Seventy-six (76) representing 38.3 percent of the respondents had ages between 41 and 50 years which was also the dominant age group. The least group in the age distribution are those who are 51 years and above who were just (27) representing 13.5 percent. This means that respondents were of maturity age to give the right responses to the questions posed.

Gender of Respondents

The results show that (123) representing 61.5 percent of the respondents are males and the remaining (77) representing 38.5 percent were

females. This suggests that more males participated in the study than the females. However, the opinions shared in this study were enriched by the inputs from both genders.

Educational Level of Respondents

The results in Table 6 reveal that majority of the respondents have first degrees who are professionals and this represents 76 percent of the total respondents, this was followed by those with postgraduate professional degree who constituted (46) representing 23 percent of the total respondents. Only 2 of the respondents had first degree who are non-professional, representing 1 percent and these were in the minority among the teachers. This implies that greater majority of the respondents were professional teachers with the required qualification to teach at the SHS level of education. They were therefore knowledgeable to properly understand the questions posed and provide the right answers for valid research analysis.

Working Experience of Respondents

As indicative of Table 6, the result indicates that out of 200 respondents, those with between 16 and 20 years working experience had the greatest number (63) and percentage (31.5%). They were followed by those who had 1 to 5 years working experience and these were (50) representing 25 percent of the total respondents. Those who had 6-10 years working experience formed (29) representing 14.5 percent of the respondents. Only (20) representing 10 percent of the respondents had working experience above 20 years. It very clear that majority of the respondents had a reasonable duration of teaching experience to have basic understanding of the concept of instructional supervision and its implication in the teaching learning.

Therefore, they could be in the right position to provide the right answers to questions posed in this regard.

Table 7 captures the demographic background of the supervisors who formed part of the respondents to the questionnaires administered.

Table 7: *Demographic Characteristics of Supervisors*

	Frequency	Percent
Age		
36-40	13	46.4
30-35	8	28.6
41-50	6	21.4
51 and above	1	3.6
Total	<u>28</u>	<u>100</u>
Gender		
Males	16	57.1
Females	12	42.9
Total	<u>28</u>	<u>100</u>
Educational Qualification		
Post graduate (Professional)	21	75
First degree (professional)	6	21.4
First degree (non-professional)	1	3.6
Total	<u>28</u>	<u>100</u>
Working Experience in Supervisory Post		
Above 20 years	12	42.9
6-10 years	7	25.0
11-15 years	5	17.9
1-5 year	4	14.3
Total	<u>28</u>	<u>100</u>
Working Experience (General)		
16-20 year	17	60.7
11-15 years	7	25
6-10 years	4	14.3
Total	<u>28</u>	<u>100</u>
Position		
Departmental Head	22	78.6
Assistant Headmaster (Academics)	3	10.7
Assistant Headmaster (Administration)	3	10.7
Total	<u>28</u>	<u>100</u>

Source: *Field data, (2021).*

Age of Respondents

The results in Table 7 show that (13) representing 46 percent of the supervisors in the selected schools were between the age range of 36 and 40 years whilst (8) representing 28.6 percent of them were between the ages of 30 and 35 years. Six (6) supervisors representing 21.4 percent of the respondents fell within 41 and 50 years age range. The least group in the age distribution are those who are 51 years and above who was just (1) 3.6 percent. Clearly, respondents were mature in terms of age to have understanding of the phenomena under study. Their responses to the questions posed could thus be right for valid research analysis.

Gender of Respondents

The results also show that (16) representing 57.1 percent of the respondents were females and the remaining (12) representing 42.9 percent are males. This suggests that although more male supervisors participated in the study than the females, the views, however, shared in this study were not single-sided in terms of gender input.

Educational Level of Respondents

The results in Table 7 reveal that majority (21) representing 75 percent of the respondents have post graduate degree. Additionally, (6) representing 21.4 percent of the respondents were first degree holders with professional teaching qualification. Only 1 of the respondents had first degree without professional qualification, representing 3.6 percent and these were in the minority among the supervisors. This means that overwhelming majority of the respondents were professionally qualified enough to appreciate and answer

questions relating to instructional supervision concept and its influence on students.

Working Experience of Respondents at Supervisory Position

As indicative of Table 7, the results indicate that out of 28 respondents, (13) representing 42.9 percent of them had served for a period between 16 and 20 years at the supervisory position. Seven (7) representing 25 percent of the respondents had worked at the supervisory position for a period between 6 to 10 years and (5) 17.9 percent of them had 11-15 years working experience at the supervisory post. Those who had been supervisors for a period between 1 and 5 years were 4 and this represents 14.3 percent. This suggests that greater majority of the respondents have considerable number of years' experience at the supervisory position to clearly know the style of instructional supervision they apply. Hence, their responses to the questions posed in this study were rightly-informed and could be relied upon for valid research analysis.

Working Experience of Respondents in Teaching

From Table 7, those who had taught for 16 to 20 years were (13) representing 46.4 percent of the total respondents. They were followed by those with 11-15 years teaching experience, constituting (7) representing 25 percent of the respondents. Next were those who had teaching experience ranging between 6 and 10 years; they are (4) representing 14.3 percent. This also indicates that all the supervisors were all experienced teachers who could appreciate the phenomenon under study and their implication for teaching and learning.

Position of Respondents

Finally, the respondents were asked to state their positions held in the selected schools. From Table 7, 22 representing 78.6 percent of the 28 respondents indicated that they were departmental heads: they formed the majority in this category. Three representing 10.3 percent of the total respondents were Assistant Headmasters in-charge of academic affairs and another (3) representing 10.3 percent were also Assistant Headmasters in-charge of administration in the selected schools. This implies that all the respondents were in the appropriate positions with supervisory responsibilities to give apt responses to the questions asked for valid research analysis and drawing of conclusion.

Analysis of the Main Data

Research Question One: What is the Knowledge and Usage Style of the Instructional Supervision the Selected SHS in the Kwadaso Municipality?

The first specific research purpose was to identify the instructional supervision styles used by supervisors in the selected Senior High Schools in the Kwadaso Municipality. The three main instructional supervision styles to be responded to by respondents were: clinical or collaborative instructional supervision, collegial instructional supervision, and developmental instructional supervision. In addressing the phenomenon, frequencies, percentage values as well as mean scores, also known as indices/indexes values were used to analyze the research questions.

To be able to answer research question one, respondents were requested to indicate their knowledge of the three instructional supervision styles. In order to get a balanced opinions on the phenomenon, responses were

taken from two categories of respondents: teachers whose instructions are supervised and the supervisors themselves. The responses by the two categories of respondents (the teachers and the supervisors) are captured in Table 8 and Table 9.

Respondents’ Knowledge of Instructional Supervision Styles Used in the Selected SHSs

Respondents were initially required to indicate whether or not they had knowledge of the three styles of instructional supervision being ascertained in the selected SHSs in the Kwadaso Municipality. The results are presented in Table 8 and Table 9. Table 8 shows the results of the teachers’ responses whilst table 8 shows the responses of the supervisors.

Table 8: Teachers’ Knowledge of Instructional Supervision Styles

Knowledge of Supervision Styles	Frequency	Percentage
None	72	36.0
Collegial Supervision	61	30.5
Clinical/Collaborative Supervision	37	18.5
Developmental Supervision	30	15.0
Total	200	100.0

Source: field data, (2021).

From table 8, majority (72) of the respondents representing 36 percent indicated that they had no knowledge of any of the supervision styles. However, majority (61) representing 30.5 percent of the respondents indicated that they had knowledge of collegial instructional supervision, they were followed by those who had knowledge of clinical/collaborative instructional supervision style; they were (37) representing 18.5 percent of the respondents.

Meanwhile minority (30) represented by 15 percent asserted that they had knowledge of developmental instructional supervision style. Thus, the results imply that, in aggregate, majority of the teachers (64%) were exposed to one of the three instructional supervision styles whose practices were being ascertained in the selected schools.

The supervisors were also asked to indicate their knowledge of each of the three instructional supervision styles being identified in the Senior High Schools in Kwadaso Municipality. Table 9 displays the results of the respondents in this category.

Table 9: *Supervisors' Knowledge of Instructional Supervision Styles Used the Selected SHS*

Knowledge of Supervision Styles	Frequency	Percentage
Clinical/Collaborative Supervision	22	78.6
Collegial Supervision	25	89.3
Development Supervision	25	89.3

Source: field survey, (2021)

As shown in Table 9, a good majority (22) of the 28 respondents representing 78.6 percent indicated that they had knowledge of what developmental supervision is, (25) representing 89.3 percent also had knowledge of collegial instructional supervision and another (25) 89.3 percent asserted that they had knowledge of developmental instructional supervision. Thus, the results imply that all the respondents were exposed to one of the three styles of instructional supervision or the other.

The second part of the questions designed in seeking answers from respondents to the first specific research question were on a 4-point Likert

scale type consisting of strongly agree, agree, disagree and strongly disagree. Respondents were required to agree or disagree with statements posed to them on a scale of 1 to 4 with 1- strongly disagree and 4 –strongly agree. On the whole, means between 1- 2.4 were regarded as general disagreement and means between 2.5 and 4 were regarded as general agreement. However, means between 1.0 and 1.4 were regarded as strong disagreements, and means between 3.5 and 4 were regarded as strong agreements. The responses are captured in Table 10, Table 11, Table 12, Table 13, Table 14 and Table 15.

From the teachers’ perspectives, respondents were asked to indicate the extent of their agreement or disagreement to the statements that are said to constitute the various instructional supervision styles used by the supervisors in the selected SHSs in Kwadaso Municipality. Table 10, Table 11 and Table 12 display the responses from the teachers.

Table 10: *Clinical Instructional Supervision Usage in the Selected SHSs (Teachers’ responses)*

Construct	N	Min.	Max.	Mean	Standard deviation
Clinical Instructional Supervision	200	2.00	3.60	3.04	.470
My superior involves me in the weekly instructional supervisory planning for my department/school (Q6)	200	2.00	4.00	3.05	0.670
My supervisor and I hold pre-observation conferences to clarify and agree upon the instructional actions and domains to be observed (Q7)	200	1.00	4.00	2.87	0.841
The instructional supervisory practice in my department is a collaboration between my supervisor and me (Q8)	200	2.000	4.00	3.24	.54
My supervisor visits classrooms to observe and inspect my instructional delivery weekly to ascertain areas	200	2.00	4.00	3.13	.58

where support is needed (Q9)

My supervisor holds post classroom instructional observation conferences with teachers at the end of every week to discuss observed instructional delivery practices that require improvement (Q10)	200	1.00	4.00	2.93	.82
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Source: field survey, (2021).

The results in Table 10 show that the composite index score for clinical supervision is 3.04. This implies that the respondents generally agree that clinical supervision is applied by supervisors in the three selected senior high school in the Kwadaso Municipality. The results further indicate that Question item Q6 as a component of clinical supervision had a mean score of 3.05. This also means that respondents agree that Q6 forms part of the clinical supervision applied in the three selected senior high school in Kwadaso Municipality. Question item Q7 as a component of clinical supervision had a mean score of 2.87. This implies that respondents agree that Q7 forms part of clinical supervision in the three schools. Q7 and Q8 had means above 3 indicating that they form key component of clinical supervision adopted by the teachers in the three selected schools. Also, the mean score for Q10 is 2.93 which shows that the respondents agree that Q9 forms part of clinical supervision applied in the three selected senior high school.

Table 11: *Collegial Instructional Supervision Usage in Selected SHSs (Teachers' Response)*

Construct	N	Min.	Max.	Mean	Standard
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					deviation
Collegial Instructional Supervision	200	2.40	3.60	3.06	0.36
My supervisor perceives me as a colleague in his/her instructional supervisory approach. (Q11)	200	1.00	4.00	3.04	1.03
My superior does weekly pre-observation conferences with me to jointly plan for the weeks' instructional delivery (Q12)	200	1.00	4.00	2.83	0.59
My superior Permits the teaching staff under his/her supervision to engage in peer instructional supervision and share experiences as to how to improve on our instructional delivery (Q13)	200	2.00	4.00	3.17	0.64
My superior tasks teachers under his/her supervision to compare our schemes of work and lesson plans for the semester and share views on the improved ways of preparing them for the enhancement of instructional delivery(Q14)	200	2.00	4.00	3.09	0.54
My supervisor engages the teachers in our department to periodically do peer/group observation of one another's tutoring to assess ourselves objectively for improved instructional delivery practices (Q15)	200	1.00	4.00	2.95	0.86

Source: Field Survey, (2021)

Concerning collegial supervision, the results as seen in Table 11 show that the composite index score is 3.02. This implies that the respondents agree that collegial supervision is applied in the three selected senior high school in the Kwadaso Municipality. The result further indicates that Q11 as a

component of collegial supervision had a mean score of 3.04. This also means that respondents agree that Q11 forms part of the collegial supervision applied in the three selected senior high school in Kwadaso Municipality. Q12 as a component of collegial supervision had a mean score of 2.83. This implies that respondents agree that Q12 forms part of clinical supervision in the three schools. Q13 and Q14 had means above 3 indicating that they form key component of collegial supervision adopted by the teachers in the three selected senior high schools. Also, the mean score for Q15 is 2.95 which shows that the respondents agree that Q15 forms part of collegial supervision applied in the three selected senior high school.

Table 12: *Developmental Instructional Supervision Style Usage in the Selected SHSs (Teachers' Response)*

Construct	N	Min.	Maxi.	Mean	Standard deviation
Developmental Instructional Supervision	200	1.40	3.60	3.02	0.54
My supervisors' objective for supervising my classroom instructional delivery is to help identify my instructional needs and meet them accordingly (Q16)	200	1.00	4.00	2.93	0.60
My supervisor uses distinct instructional supervisory methods for different teachers under his supervision (Q17)	200	1.00	4.00	3.02	0.89
My supervisor develops and organizes different instructional delivery training programmes for teachers based on our individual shortcomings in specific classroom experiences (Q18)	200	1.00	4.00	3.09	0.84
My supervisor observes my classroom teaching methodology and suggest other steps for the continuing improvement of instructional activities using varied strategies (Q19)	200	1.00	4.00	2.94	0.68
My supervisor designs and executes instructional supervisory actions for my professional growth and development	200	2.00	4.00	3.12	0.57

(Q20)

Source: Field Data, (2021)

With reference to developmental supervision, the results displayed in Table 12 show that the composite index score is 3.02. This implies that the respondents agree that developmental supervision is applied in the three selected senior high school in the Kwadaso Municipality. The result further indicates that Q16 as a component of developmental supervision had a mean score of 2.93. This also means that respondents agree that Q16 forms part of the developmental supervision applied in the three selected senior high school in Kwadaso Municipality. Q17 and Q18 as components of developmental supervision had a mean score above of 3. This implies that respondents agree that Q17 and Q18 form part of developmental supervision in the three schools. Q19 had a mean score of 2.94 indicating that it forms key component of developmental supervision adopted by the teachers in the three selected senior high schools. Also, the mean score for Q20 is 3.14 which shows that the respondents agree that Q20 forms part of developmental supervision applied in the three selected senior high school.

The responses from the supervisory staff charged with the duty of carrying instructional supervision in the selected SHSs also were also collected on the style of instructional supervision they employ. Respondents were required to agree or disagree with statements posed to them on a scale of 1 to 4 with 1- strongly disagree and 4 –strongly agree. On the whole, means between 1- 2.4 were regarded as general disagreement and means between 2.5 and 4 were regarded as general agreement. However, means between 1.0 and 1.4 were regarded as strong disagreements, and means between 3.5 and 4 were

regarded as strong agreements. Their responses are showcased in Table 13, Table 14 and Table 15.

Table 13: *Clinical Instructional Supervision Usage in the Selected SHSs (Supervisors' Response)*

Construct	N	Minimum	Maximum	Mean	Standard deviation
Clinical Instructional Supervision	28	1.60	3.40	2.79	0.46
I undertake weekly instructional supervisory planning for my department/school (Q8)	28	1.00	4.00	2.82	0.86
I hold pre-observation conferences with my staff to clarify and agree upon the instructional actions and domains to be observed(Q9)	28	1.00	4.00	2.75	0.79
I view my instructional supervisory practices as a collaboration between myself and my staff (Q10)	28	1.00	4.00	2.82	1.02
I visit classrooms to observe and inspect teachers' instructional delivery weekly to ascertain areas where support is needed. (Q11)	28	1.00	4.00	2.86	0.80
I hold post classroom instructional observation conferences with teachers at the end of every week to discuss observed instructional delivery practices that require improvement (Q12)	28	1.00	3.00	2.68	0.67

Source: Field Data, (2021)

The results captured in Table 13 show that the composite index score for clinical supervision is 2.79. This implies that the respondents agree that clinical supervision is applied by the supervisors in the three selected senior high school in the Kwadaso Municipality. The result further indicates that Q8 as a component of clinical supervision had a mean score of 2.82. This also means that respondents agree that Q8 forms part of the clinical supervision

applied in the three selected senior high school in Kwadaso Municipality. Q9 as a component of clinical supervision had a mean score of 2.75. This implies that respondents agree that Q9 forms part of clinical supervision used by supervisors in the three schools. Q10, Q11 and Q12 all had means above 2.5 indicating that they form key component of clinical supervision adopted by the supervisors in the three selected schools.

Table 14: *Collegial Instructional Supervision Usage in the Selected SHSs (Supervisors' Response)*

Construct	N	Min.	Maxi.	Mean	Standard deviation
Collegial Instructional Supervision	28	2.00	3.60	2.64	0.45
I perceive my teachers as colleagues in my instructional supervisory approach. (Q13)	28	1.00	4.00	3.04	1.20
I do weekly pre-observation conferences with teachers to plan together for the weeks' instructional delivery (Q14)	28	1.00	4.00	2.57	0.96
I Permit the teaching staff under my supervision to engage in peer instructional supervision and share experiences as to how to improve on their instructional delivery (Q15)	28	2.00	4.00	2.96	0.69
I task my colleagues under my supervision to compare their schemes of work and lesson plans for the term and share views on the improved ways of preparing them for the enhancement of instructional delivery (Q16)	28	1.00	4.00	2.68	0.77
I engage my department to periodically do peer or group observation of one another's tutoring to assess themselves objectively for improved instructional delivery practices (Q17)	28	1.00	4.00	1.93	0.98

I design and execute supervisory actions for the professional growth and development of teachers(Q22)	28	1.00	4.00	2.96	1.04
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Source: field survey, (2021).

Concerning collegial supervision, the results depicted in Table 14 show that the composite index score is 2.64. This implies that the respondents agree that collegial supervision is applied by supervisors in the three selected senior high school in the Kwadaso Municipality. The result further indicates that Q13 as a component of collegial supervision had a mean score of 3.04. This also means that respondents agree that Q13 forms part of the collegial supervision applied by supervisors in the three selected senior high school in Kwadaso Municipality. Q14, Q15 and Q16 as components of collegial supervision had mean scores above 2.5. This implies that respondents agree that Q14, Q15 and Q16 forms part of collegial supervision in the three schools. However, Q19 had a mean score of 1.93 which indicates that it is not a key component of collegial supervision adopted by the supervisors in the three selected senior high schools.

Construct	N	Min.	Maxi.	Mean	Standard deviation
Developmental	28	1.40	3.80	2.64	0.66
My objective of supervising the teachers in my department is to help identify individual teachers' instructional needs and meet them accordingly (Q18)	28	1.00	4.00	2.89	1.03
I operate different instructional supervisory methods for different teachers under my supervision (Q19)	28	1.00	4.00	2.14	0.93
I develop and organize different instructional delivery training programmes for teachers based on their shortcomings in specific classroom experiences (Q20)	28	1.00	4.00	2.29	1.15

I observe teachers' classroom teaching methodology and suggest other steps for the continuing improvement of instructional activities using varied strategies (Q21)	28	2.00	4.00	2.89	0.50
I design and execute supervisory actions for the professional growth and development of teachers(Q22)	28	1.00	4.00	2.96	1.04

Table 15: *Developmental Instructional Supervision Usage in the Selected SHSs*

Source: field survey, (2021).

With reference to developmental supervision, the results displayed in Table 15 show that the composite index score is 2.64. This implies that the respondents agree that developmental supervision is applied by the supervisors in the three selected senior high school in the Kwadaso Municipality. The result further indicates that Q18 as a component of developmental supervision had a mean score of 2.89. This also means that respondents agree that Q18 forms part of the developmental supervision applied in the three selected senior high school in Kwadaso Municipality. Q19, and Q20 as components of developmental supervision had a mean score below of 2.5. This implies that respondents disagree that Q19 and Q20 form part of developmental supervision applied by supervisors in the three schools. Q21 and Q22 on the other hand had mean score above 2.5 indicating that they form key component of developmental supervision adopted by the supervisors in the three selected senior high schools.

Research Question Two: Which of the Instructional Supervision Styles is Most Used in the Selected SHSs in Kwadaso Municipality?

The study sought to ascertain which of the instructional supervision styles is most applied in the selected in the selected SHS. Composite indices (Mean of means) were computed for each instructional supervision style. Calculated composite value between 2.5 and 4 indicates usage of a given instructional supervision style. The higher the composite value, the more commonly used of an instructional supervision style. The results from the analysis of data in answering this research question are shown in table 16.

Table 16: The Most Used Style of Instructional Supervision

Construct	Composite Score
Clinical Instructional Supervision	2.92
Collegial Instructional Supervision	2.85
Developmental Instructional Supervision	2.83

Source: field survey, (2021).

As shown in Table 16, majority of the respondents (both the supervisory and the teaching staff) generally agreed that all the styles of instructional supervision are applied by the supervisors in the three selected SHSs in Kwadaso Municipality. Nonetheless, clinical instructional supervision is the most used style of instructional supervision by supervisors in the schools, evidenced by its composite index of 2.92 which happens to be the highest among the three. This is followed by collegial and developmental instructional supervision styles, supported by their respective composite index values of 2.85 and 2.83.

Research Question Three: What Challenges are Associated with Implementation of Instructional Supervision in the selected SHSs in the Kwadaso Municipality?

Respondents were required to rate the challenges associated with the application of instructional supervision style in the three selected schools in Kwadaso Municipality. Respondents were required to agree or disagree with statements posed to them on a scale of 1 to 4 with 1- strongly disagree and 4 – strongly agree. Calculated mean values between 1- 2.4 were regarded as general disagreement and means between 2.5 and 4 were regarded as general agreement. However, means between 1.0 and 1.4 were regarded as strong disagreements, and means between 3.5 and 4 were regarded as strong agreements. On the whole, means between 1 and 2.4 were regarded as not a challenge and means between 2.5 and 4 were regarded as a challenge. The results are presented in Table 17.

Table 17: *Challenges Associated with Implementation of Instructional Supervision*

Challenges	N	Mini.	Maxi.	Mean	Standard deviation
Supervisors do not have enough financial motivation to supervise teachers' classroom instructional delivery	28	1.00	4.00	3.11	1.10
Supervisors are not trained periodically to be abreast of modern instructional supervisory techniques	28	1.00	4.00	2.75	1.40
Teachers see themselves as masters of their subjects and do not see the need for supervision of their instructional delivery	28	1.00	4.00	2.54	1.07
There is inadequate logistical support for the supervisors to effectively carry out their instructional supervisory duties	28	1.00	3.00	2.43	0.79
There is absence of school policy regarding instructional supervision of teachers	28	1.00	4.00	2.21	1.19

Teachers view instructional supervision as a victimization strategy and therefore do not cooperate during supervision	28	1.00	2.00	2.21	0.50
The supervised staff is so large that there is hardly enough time to attend to each teacher's needs	28	1.00	2.00	1.57	0.50
Instructional supervisors are equally overburdened with teaching and/or administrative responsibilities.	28	1.00	2.00	1.25	0.44

Source: field survey, (2021).

The results in Table 17 show that respondents agreed to the statement that Supervisors do not have enough financial motivation to supervise teachers' classroom instructional delivery, given the mean score of 3.11 obtained for this question. This implies that respondent saw lack of financial motivation as a challenge associated with the instructional supervision practices in the selected SHS in the Kwadaso Municipality. Given the index score of 2.75 obtained for this category, respondents equally agreed to the suggestion that supervisors are not trained periodically to be abreast of modern instructional supervisory techniques. By implication, respondents view lack of period training of instructional supervisors a challenge which hampers effective instructional supervision in the selected SHSs. Furthermore, respondents agreed to the statement that teachers see themselves as masters of their subjects and do not see the need for supervision of their instructional delivery. This is supported by the calculated mean value of 2.54 obtained for the responses to this question. This implies that respondents saw how teachers consider themselves as masters of their subjects and do not need any supervision as a challenge to the various instructional supervision styles applied in the schools.

On the other hand, the score of 2.43 for inadequate logistical support for the supervisors to effectively carry out their instructional supervisory duties indicates that respondents disagreed to this statement. Again, the mean value of 2.21 got for the statement that there is absence of school policy regarding instructional supervision of teachers shows that respondents disagreed to this assertion. This means that absence of school policy on instructional supervision of teachers was not considered to be a challenge to the various styles of instructional supervision used in the schools. Respondents also disagreed to the supposition that teachers view instructional supervision as a victimization strategy and therefore do not cooperate during supervision. The computed mean score of 2.21 obtained for the responses to this statement supports the position of the respondents.

Respondents also disagreed to the suggestion that the supervised staff is so large that there is hardly enough time to attend to each teacher's needs. The respondents' position is evidenced by the computed mean value of 1.57 scored from the responses to this statement. This implies that respondents did not see this statement as part of the challenges associated with instructional supervision styles being applied in the schools. Lastly, with the computed mean score of 1.25 for the responses to this statement, respondents strongly disagreed to the suggestion that instructional supervisors are equally overburdened with teaching and/or administrative responsibilities. This means that respondents did not consider this supposition a challenge in connection with instruction supervision practices in the selected SHSs.

Research Question Four: What is the Influence of Instructional Supervision styles on Students’ Academic Performance in the Selected SHSs in Kwadaso Municipality?

This section presents the results of the influence of each instructional supervision style on students’ performance in the three selected senior high schools in Kwadaso Municipality. Multiple regression was operationalized, setting the three instructional supervision styles as independent variables and the four core subjects, namely, English, Science, Social Studies and Core Mathematics, were set at the dependent variables. The results are present in Table 18 to 21.

Table 18: *Influence of Instructional Supervision Practices the on Students’ Performance in English Subject*

Variable	Coefficient (B)	Standard	t-statistic	p-value
Clinical	-0.027154	0.013056	-2.079661	0.0365
Collegial	0.023763	0.281504	0.084413	0.9328
Developmental	0.113642	0.322033	0.352890	0.7244
Constant	6.834505	0.725138	9.425108	0.0000
R		.360 ^a		
R Square		.165		
Adjusted R Square		.152		

Source: field data, (2021)

(B is significant at $p \leq 0.05$)

Dependent Variable: *English Language Subject*

The results in table 18 indicate that clinical supervision exerts significant effect on students’ performance in English at the 5 percent ($p=0.0365 < 0.05$) level of significance. The negative sign for the coefficient

($B = -0.027154$) implies that application of clinical supervision reduces student numerical grade for their performance in English. The magnitude of the coefficient implies that application of clinical supervision reduces numerical grade for examination in English by 0.03. The reduction of numerical grade through the application of clinical supervision implies that clinical supervision enhances students' capability to pass examination in English. This implies that application of clinical supervision is effective in promoting students' performance in examination in English.

The results further show in table 18 that instructional supervision influences students' examination performance in English Language by 16.5 percent. This is represented by the R square value of 0.165 in table 18. It implies that other factors that similarly influence students' academic performance in English Language is 83.5 percent.

However, collegial and developmental supervisions exert insignificant effect on students' performance in examination in English even at the 10 percent level of significance. This implies that application of collegial and developmental supervision styles is not effective in promoting students' performance in examination in English.

Table 19: *Influence of Instructional Supervision Practices on Students' Performance in Core Mathematics Subject*

Variable	Coefficient (B)	Standard Error	t-statistic	p-value
Clinical	0.108701	0.507873	0.214032	0.8306
Collegial	0.146025	0.419425	0.348155	0.7279
Developmental	-0.201722	0.083341	-2.420420	0.0174

Constant	6.201812	1.080417	5.740205	0.0000
R		.384 ^a		
R Square		.176		
Adjusted R Square		.162		

Source: Field Data, (2021) (B is significant at $p \leq 0.05$)
 Dependent Variable: Core Mathematics

The results in table 19 indicate that clinical and collegial supervisions exert insignificant effect on students’ performance in examination in Core Mathematics even at the 10 percent level of significance. This implies that application of clinical and collegial instructional supervision styles is not effective in promoting students’ performance in examination in Core Mathematics.

The results indicate that developmental supervision exerts significant effect on students’ performance in Core Mathematics at the 5 percent ($p=0.0174 < 0.05$) level of significance. The negative sign for the coefficient (B= -0.201722) implies that application of developmental supervision reduces student numerical grade for their examination in Core Mathematics. The magnitude of the coefficient implies that application of developmental supervision reduces numerical grade for examination in Core Mathematics by 0.20. The reduction of numerical grade through the application of developmental supervision implies that developmental supervision enhances students’ capability to pass examination in Core Mathematics. This implies that application of developmental supervision is effective in promoting students’ performance in examination in Core Mathematics.

As shown in table 20, instructional supervision contributes towards students’ academic performance in Core Mathematics by 17.6 percent. This is represented by R square value of 0.176. Other factors that equally account for changes in students’ academic performance in Core Mathematics is 82.4 percent.

Table 20: *Influence of Instructional Supervision Practices on Students’ Performance in Science Subject*

Variable	Coefficient (B)	Standard error	t-statistic	p-value
Clinical	0.161451	0.066693	2.420825	0.0167
Collegial	-0.064014	0.029070	-2.202040	0.0200
Developmental	-0.143657	0.065407	-2.196343	0.0261
Constant	7.007020	0.816161	8.585340	0.0000
R		.320 ^a		
R Square		.146		
Adjusted R Square		.135		

Source: field data, (2021) (B is Significant at $p \leq 0.05$)

Dependent Variable: Science Subject

The results in table 20 indicate that clinical supervision exerts significant effect on students’ performance in science subject at the 5 percent ($p=0.0167 < 0.05$) level of significance. The positive sign for the coefficient ($B=0.161451$) implies that application of clinical supervision increases student numerical grade for their examination in science. The magnitude of the coefficient implies that application of clinical supervision increases numerical

grade for examination in science by 0.16. The increase of numerical grade through the application of clinical supervision implies that clinical supervision reduces students' capability to pass examination in science. This implies that application of clinical supervision is counterproductive in promoting students' performance in examination in science.

The results also indicate that collegial supervision exerts significant effect on students' performance in science subject at the 5 percent ($p=0.0200<0.05$) level of significance. The negative sign for the coefficient ($B= -0.064014$) implies that application of collegial supervision reduces student numerical grade for their examination in science. The magnitude of the coefficient implies that application of collegial supervision reduces numerical grade for examination in science by 0.06. The reduction of numerical grade through the application of collegial supervision implies that collegial supervision enhances students' capability to pass examination in science. This implies that application of collegial supervision is effective in promoting students' performance in examination in science.

The results indicate that developmental supervision exerts significant effect on students' performance in science at the 5 percent ($p=0.0261<0.05$) level of significance. The negative sign for the coefficient ($B= -0.143657$) implies that application of developmental supervision reduces student numerical grade for their examination in science. The magnitude of the coefficient implies that application of developmental supervision reduces numerical grade for examination in science by 0.14. The reduction of numerical grade through the application of developmental supervision implies that developmental supervision enhances students' capability to pass

examination in science. This implies that application of developmental supervision is effective in promoting students’ performance in examination in science.

From table 21, the results show that instructional supervision influences students’ examination performance in Core Science subject by 14.6 percent. This is represented by R square value of 0.146 in table 21. This implies that other factors than instructional supervision not captured in this study also contribute towards students’ performance by 85.40 percent.

Table 21: *Influence of Instructional Supervision Practices on the Students’ Performance in Social Studies Subject*

Variable	Coefficient (B)	Standard error	t-statistic	p-value
Clinical	0.233511	0.499801	0.467207	0.6406
Collegial	-0.266610	0.100762	-2.645922	0.0018
Developmental	0.071171	0.472185	0.150726	0.8803
Constant	5.009067	1.063244	4.711116	0.0000
R		.373 ^a		
R Square		.171		
Adjusted R Square		.157		

Source: field data, (2021). (B is significant at $p \leq 0.05$)
 Dependent Variable: *Social Studies Subject*

The results in table 21 indicate that clinical and developmental supervisions exert insignificant effect on students’ performance in examination in Social Studies even at the 10 percent level of significance. This

implies that application of clinical and developmental supervisions is not effective in promoting students' performance in examination in Social Studies.

The results indicate that collegial supervision exerts significant effect on students' examination performance in Social Studies at the 5 percent ($p=0.0018<0.05$) level of significance. The negative sign for the coefficient ($B= -0.266610$) implies that application of collegial supervision reduces student numerical grade for their examination in Social Studies. The magnitude of the coefficient implies that application of collegial supervision reduces numerical grade for examination in Social Studies by 0.27. The reduction of numerical grade through the application of collegial supervision implies that collegial supervision enhances students' capability to pass examination in Social Studies. This implies that application of collegial supervision is effective in promoting students' performance in examination in Social Studies.

Again, from table 21, the instructional supervision styles account for changes in students' performance in Social Studies by 17.1 percent. This is represented by the R square value of 0.171 in table 21. This indicates that other factors that similarly contribute towards students' academic performance in Social Studies subject is 82.9 percent.

Research Question Five: Which of the instructional supervision styles best predicts students' academic performance in the selected SHSs in Kwadaso Municipality?

In answering this research requestion, a multiple regression was operationalized. The three instructional supervision styles were set as

independent variables and the overall students’ performance in examination was set as dependent variable. The results are displayed in table 22.

Table 22: *Influence of Instructional Supervision Styles on the Students’ Performance*

Variable	Standardized Coefficient (β)	Standard Error	t-statistic	p-value
Clinical	-.030	.327	3.161	.002
Collegial	-.038	.327	-2.295	.048
Developmental	-.076	.476	-2.584	.030
Constant	17.143	5.424	-2.679	.028

Source: field survey, (2021) (B is significant at $p \leq 0.05$)
 Dependent Variable: *Students’ academic performance*
 Predictor: *Clinical, collegial, developmental*

As seen from table 22, the results show that developmental instructional supervision best predict students’ academic performance at 5 percent ($p=0.03 < 0.05$) level of significant, given its highest coefficient of -0.076. The negative value indicates that application of developmental instructional supervision reduces students numerical grade value by 0.076. This implies that students’ academic performance in examination is best improved when developmental instructional supervision is applied. On the other hand, clinical and collegial supervision styles predict students’ academic performance at 5 percent ($p=0.002 < 0.05$; $p=0.0048 < 0.05$) levels of significance. Also, the negative values of the coefficient for the two styles of supervision indicate, that collegial supervision style application reduces students’ numerical grade in all the four core subjects by 0.030, whilst collegial supervision application reduces students’ numerical grade in the four core subjects by 0.038.

Lastly, regression model was run to determine how statistically significant the influence of the overall instructional supervision on students' academic performance. The regression model was also run to ascertain the magnitude of influence that instructional supervision has on students' academic performance in the selected SHSs in Kwadaso Municipality. The results are displayed in tables 23 and 24.

Table 23: *Influence of Instructional Supervision Practices on the Students' Performance*

Variable	Coefficient	Standard error	t-statistic	p-value
Instructional Supervision	-0.285069	0.202496	-2.407771	0.0160
Constant	8.741720	0.612927	14.26224	0.0000

Source: Field Data, (2021). (Significant at $p=0.05$)

Dependent Variable: *Students' Performance in Examination*

The results in table 22 indicate that instructional supervision exerts significant effect on students' examination performance at the 5 percent ($p=0.0160<0.05$) level of significance. The negative sign for the coefficient implies that application of instructional supervision reduces student numerical grade for their examination. The magnitude of the coefficient implies that application of instructional supervision reduces numerical grade for examination by 0.29. The reduction of numerical grade through the application of instructional supervision implies that instructional supervision enhances students' capability to pass examination. This implies that application of

instructional supervision is effective in promoting students’ performance in examination.

Summary of the Regression Model

Regression analysis was operationalized to determine the changes that occur in the dependent variable’s mean when there is a change in the independent variable. That is to say, the study tested the extent to which the independent variable (clinical, collegial, and developmental supervisions) accounts for a change in the dependent variable (students’ academic performance). The results are captured in table 24.

Table 24: Model Summary for the Three Instructional Supervision Styles

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
Overall Instructional Supervision	.480 ^a	.220	.202	.29519
Clinical	.198 ^a	.091	0.083	.12162
Collegial	.106 ^a	.048	0.045	.10848
Developmental	.176 ^a	.081	0.074	.06494

a. Predictors: (Constant), Clinical, Collegial, Developmental, Overall Supervision

Source: Field Data, (2021)

From table 24, the independent variable (integration of clinical, collegial and developmental supervision styles) had 20.2 percent influence on the independent variable (students’ academic performance in examination). This is represented by the adjusted R square value of 0.202 in table 24. This means that other variables than instructional supervision equally can influence students’ academic performance in examination by 79.8 percent. Impliedly,

the three instructional supervision styles contribute towards students' performance in examination by 20.2 percent and this is moderately significant statistically.

Furthermore, as shown in table 24, clinical instructional supervision as a component of independent variable, accounts for 8.3 percent of the overall influence that instructional supervision has on students' academic performance. This is represented by the adjusted R square value of 0.083 table 24. Similarly, collegial and developmental supervision styles as components of the independent variable account for 4.5 percent and 7.4 percent of the overall influence that instructional supervision has on the independent variable, students' academic performance. These are represented by their respective R Square values of 0.045 and 0.074 in table 24.

Testing of Hypotheses

H₀: There is no statistically significant difference in students' academic performance in the selected Senior High Schools in the Kwadaso Municipality.

H₁: There is a statistically significant difference in students' academic performance in the selected Senior High Schools in the Kwadaso Municipality.

ANOVA Test of Students' Performance Across the three Schools

This section discusses the ANOVA test results on the students' performance in the examinations across the selected schools. The results are presented in Table 25.

Table 25: *ANOVA Test of Students' Performance Across the three Schools*

Performance	F-statistic	Probability value
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Aggregate examination score	140.392	0.000
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Source: Field Data, (2021).

The test results show that the F-statistic value of 140.392 is statistically significant at the 1 percent level of significance. This implies that there is significant difference in the examination performance of students across the three schools.

Table 26: Tukey's Post-hock Analysis of Students' Performance Across the three Schools

Aggregate score	terminal	Mean difference	p-value
Prempeh vs YAGS		-9.04138	.000
YAGS vs AGSHS		-11.12647	.000
Prempeh vs AGSHS		-2.08509	.033

Source: field Survey, (2021).

To compare the students' performance across the three schools, Tukey post hoc analysis was conducted. The results show in table 26 that average examination score of students in Prempeh College was significantly lower than the students in Yaa Asantewaa Girls SHS at the 1% level ($p=0.00$) of significance. This means that students' examination performance in Prempeh College is better than students' examination performance in Yaa Asantewaa Girls SHS. Again, average examination score of students in Yaa Asantewaa Girls SHS is significantly lower than the students in Assemblies of God SHS at the 1% level ($p=0.000$) of significance. This means that students' examination performance in Yaa Asantewaa Girls SHS is better than students' examination performance in Assemblies of Girls SHS. Finally, the results

show that average examination score of students in Premeph College is significantly lower than the students in Assemblies of God SHS at the 5% level ($p=0.000$) of significance. This means that students' examination performance in Premeph College is better than students' examination performance in Assemblies of God SHS.

Based on the results from the analysis, the null hypothesis is rejected in favour of the alternative that states that there is a statistically significant difference in students' academic performance in the selected Senior High Schools in the Kwadaso Municipality is rather upheld.

H₀: There is no statistically significant gender difference with respect to the influence of instructional supervision styles on students' academic performance in the three selected Senior High Schools in the Kwadaso Municipality.

H₁: There is a statistically significant gender difference with respect to the influence of instructional supervision styles on students' academic performance in the three selected Senior High Schools in the Kwadaso Municipality.

Table 27: Gender Difference in Academic Performance with Respect to the Influence of Instructional Supervision

Variables	Gender	N	Mean	Std. Dev.	t-value	p-value	η^2
Clinical Supervision	Male	193	2.952	0.606	0.082937	0.9339	
	Female	174	3.048	0.658			
Collegial Supervision	Male	193	3.121	0.420	2.420	0.0267*	0.043
	Female	174	3.429	0.589			
Developmental Supervision	Male	193	2.939	0.639	2.230	0.0317*	0.061
	Female	174	3.137	0.594			

Source: Field Survey, (2021) * $p < 0.05$ df = 365 (N = 367)

The results shown in table 27 indicate that the interaction between gender and clinical supervision exert insignificant effect on students' performance in examination at the 10 percent level ($p=0.9339$) of significance. Although under clinical instructional supervision, male students' performance in examination (mean—2.952, Std. Dev.= 0.606) is slightly higher or better than that of female students (Mean—3.048, Std. Dev.= 0.658), their performance difference is statistically insignificant at 10 percent level ($p=0.9339$) of significance. This implies that there is no gender difference in academic performance with respect to influence of clinical supervision.

The results further show that that the interaction between gender and collegial supervision exerts significant effect on students' terminal performance at the 5 percent level ($p=0.0267$) of significance. There is statistically significant difference between male students' examination performance (mean—3.121, Std. Dev.= 0.420) and female students' examination performance (mean—3.429, Std. Dev.= 0.589) under the influence of collegial instructional supervision. This implies that male students' grade in examination is higher or better than females with respect to

the influence of collegial supervision, indicating that application of collegial supervision is more effective in promoting male students' performance in examination as compared to female students. However, the Eta value ($\eta^2 = 0.043$) means that collegial instructional supervision accounts for 4.3 percent in determining the difference between male and female students' examination performance. This also suggests that other factors than collegial supervision can determine difference between male and female examination performance by 97.7 percent.

Lastly, the results from table 23 reveal that the interaction between gender and developmental supervision exerts significant effect on students' performance at the 5 percent level ($p=0.0317$) of significance. There is statistically significant gender difference between male students' examination performance (mean—2.939, Std. Dev.= 0.639) and female students' examination performance (mean—3.137, Std. Dev.= 0.594) under the influence of developmental instructional supervision style. It implies that male students' grade in examination is higher or better than that of female students with respect to the influence of developmental supervision. This means that application of developmental supervision is more effective in promoting male students' performance in examination as compared to female students. The Eta value ($\eta^2 = 0.061$) implies that collegial instructional supervision influences differences in gender performance in examination by 6.1 percent. Thus, other factors than developmental instructional supervision can also determine the differences between male and female students' examination performance by 93.9 percent. In summary, collegial and developmental instructional

supervision styles were found to engender statistically significant influence on differences in gender examination performance.

From the results of the analysis, the null hypothesis was rejected in favour of the alternative that states, that there is a statistically significant gender difference with respect to the influence of instructional supervision styles on students' academic performance in the three selected Senior High Schools in the Kwadaso Municipality.

Discussion of the Results

The results from the data analysis presented above have been discussed in this subsection as follows.

Instructional supervision style applied in the selected SHSs in the Kwadaso Municipality.

The study found that all the three instructional supervision styles, namely, clinical, collegial and developmental supervisions, were applied in the selected SHS in Kwadaso Municipality. This finding is in harmony with the result of the study by Gordan and Ross-Gordan (2014) which established that, among other things, integration of clinical supervision style, collegial and developmental styles of supervision are commonly used by school leadership. This finding, however, is contrary to the respective findings by Rodgers and Jenkins (2010), Morrison and Wonnacott (2010) and, Isaiah and Isaiah (2014) who rather identified two of the three supervision styles in their institutions of research. For instance, Rodgers and Jenkins (2010) and, Wonnacott (2010) found collegial and clinical instructional supervisions to be used in the basic

schools. On the other hand, Isaiah and Isaiah (2014) identified collegial and developmental supervision styles in their studies as being applied in the schools. The differences in the findings may be attributed to geographical variations of the institutions where these researches were carried out and the differences in teacher orientation in these schools.

Instructional supervision styles mostly used in the selected SHSs in Kwadaso Municipality.

The study revealed that clinical supervision was most used by the supervisors in the selected SHSs in the Kwadaso Municipality. This was followed by collegial supervision and next was developmental supervision. This finding confirms the finding of Ndebele (2013), Moswela and Mphale (2015), Shah (2017) and Ibrahim (2013) who established that collaborative, also known as clinical supervision style, among others, was most preferred by educational leadership to the other supervisory styles. The point of departure of this finding from that of Ndebele (2013) was that Ndebele (2013) rather found both clinical and developmental supervision styles as the most applied supervision styles by educational leadership. The findings of this study, however, contradicts the finding of Gordan and Ross-Gordan (2014) which rather found developmental instructional supervision style to be most used by supervisors in the selected school.

Challenges associated with instructional supervision in the selected SHSs in the Kwadaso Municipality.

The study equally found lack of financial motivation as a challenge associated with the instructional supervision practices in the selected SHS in

Kwadaso Municipality. This finding is consistent with the finding of Abdille (2012) who identified, among others, unsatisfactory financial motivation for supervisor as part of the challenges bedeviling supervisions in pre-tertiary schools in Kenya. Lack of period training of instructional supervisors was identified in this study as a challenge which hampers effective instructional supervision in the selected SHSs. This finding was in agreement with the finding by Abdille (2012), Charles et al. (2012) and Comfort et al. (2017). Charles et al. (2012) identified lack of frequent in-service training of school and instructional supervisors as a challenge associated with instructional supervision. Similarly, Abdille (2012) and Comfort et al. (2017) found in their respective studies that heads of departments in the Kenya and Nigeria senior high schools do not undergo refresher training programmes on instructional supervision at all for about a year and this affect effectiveness of their supervisory approach. The study also identified how teachers consider themselves as masters of their subjects and do not need any supervision as a challenge to the various instructional supervision styles applied in the selected school. This finding also confirms the finding of Gachoya (2008) and Ndung'u (2015) who found in their respective studies that uncooperativeness and hostility on the part of most teachers towards school and instructional supervision are viewed as a heavy obstacle to school authorities in carrying out their instructional supervisory function. This finding, however, is at variance with the finding by Muriithi (2012) who instead established in his research in Gabon that pre-tertiary school teachers were ever ready to submit their lesson plans and other academic records for inspection. The teachers further believed that supervision helped them to identify areas where they fell

short and where improvement was much needed to enhance their pedagogical capacity (Muriithi, 2012).

The study did not find inadequate logistical support for instructional supervisors as a challenge to supervision in the selected SHSs. This finding is contrary to the findings by Abdille (2012) who also identified among others that logistical issues are part of the challenges bedeviling instructional supervision in pre-tertiary schools in Kenya. Absence of school policy regarding instructional supervision of teachers was also not found in the study as a challenge to instructional supervision. Teachers view instructional supervision as a victimization strategy and therefore do not cooperate during supervision was equally not found as a challenge to instructional supervision. This finding also contradicts the findings by Adikinyi (2007) which concluded that the contemporary teachers are more than before skeptical about the motive behind instructional supervision by their head teachers and principals based on the past approach of instructional supervision which were used by educational supervisors to harass teachers. As a result, they do not appreciate the concept and practice of instructional supervision as an avenue or a tool for providing support and guidance for their professional growth and development (Adikinyi, 2007). They instead still hold on to the initial conception and at any chance will likely to resist it.

Similarly, the supervised staff is so large that there is hardly enough time to attend to each teacher's needs was not considered a challenge associated with instructional supervision in the school. This finding is equally in harmony with the finding by Jared (2011) and Wellington (2011) in their respective studies in Uganda and Lesotho elementary and high schools. Jared

(2011) and Wellington (2011) revealed in their studies, that heads of schools were challenged in carrying out their instructional supervisory responsibilities by the large number of staff they had to deal with in relation to supervising their instructions. The differences in findings could be ascribed to differences in institutional and governance arrangement of these schools.

Lastly, instructional supervisors are equally overburdened with teaching and/or administrative responsibilities was not found as a challenge to instructional supervision in the school. This finding contradicts the findings by Ndugu'u (2015) and Dipola and Hoy (2013). Dipola and Holy (2013) rather found that principals and heads of high schools are usually tasked with other many management duties aside the instructional supervisory work. They become torn between these two responsibilities and they are always to balance the two in order to be on top. Ndung'u's (2015) research also showed that in carrying out their functions, the educational supervisors usually made a trade-off between the instructional supervisory aspect and other administrative duties on daily basis. This therefore poses a serious challenge in achieving effectiveness in their instructional supervisory role.

The influence of instructional supervision styles on students' academic performance in selected SHSs in Kwadaso Municipality.

The study found the application of clinical instructional supervision to have positive statistical influence on students' academic performance, particularly students' examination performance in English Language subject. Similarly, developmental supervision was found in this study to have statistically positive influence on students' academic performance, especially in Core Mathematics. Lastly, the study also found application of collegial and

developmental supervision styles to have statistically positive influence on students' academic performance in Science Subject. These findings are in harmony with the findings by Tesfaw and Hofman's (2014) and Sule et al. (2012). The findings from the study by Tesfaw and Hofman (2014) established that that instructional supervision had positive influence on the professional development of teachers and the ultimate result is an improvement on the performance of students. Similarly, the findings by Sule et al. (2012) concluded that instructional supervision enhanced teachers' instructional delivery which translate into improved pupils' academic output.

The study found that instructional supervision exerts significant influence on students' examination performance by reducing their numerical grade by an average of 0.29. This implies that application of instructional supervision results in improvement on students' academic performance. Again, it was found in the study that the three instructional supervision styles contribute towards students' performance in examination by 22 percent. These findings are in accord with the findings of Selio (2011), Wawira (2012), Reigeluth (2013), Ibrahim (2013), Shah (2017) and Aaron et al. (2017). The study of Selio (2011) revealed that instructional supervision accounted for 22 percent of factors that determined special students' academic performance which was found to be statistically significant. Wawira (2012) and Reigeluth (2013) also pointed out that instructional supervision could statistically influence students' performance significantly in their examination score by up to 21 percent and 23 percent respectively. Ibrahim (2013) also established that the combined effect of instructional supervision on determining students' academic grades was 19 percent and this was deemed to be statistically

significant enough. Furthermore, Shah (2017) established that instructional supervision statistically had 18 percent effect on students' ability to pass their examination. Similarly, Aaron et al. (2017) found that instructional supervision statistically influenced students' academic performance by 20 percent and this was accounted to be significant.

The instructional supervision style that best predicts students' academic performance in the selected SHSs in Kwadaso Municipality.

The study revealed that developmental instructional supervision best predicts students' academic performance since its application reduces students' numerical grade by 0.076 point. This finding is in accord with the finding by Ibrahim (2013) which established that developmental supervision had the most positive influence on students' academic performance compared with collegial supervision style. This finding however contradicts the finding Reigeluth (2013), Akinwumi, (2016) and Aaronson et al. (2017). The study of Akinwumi, (2016) revealed that clinical supervision style had the highest positive influence on students' academic performance compared with collegial supervision. Similarly, Aaronson et al. (2017) et al. established that clinical supervision style best drove students' academic achievement compared with developmental and collegial supervision. Reigeluth (2013) also found that collegial supervision had the most positive influence on students' academic performance in basic and second cycle schools compared with other styles of supervision. Geographical and institutional differences might have accounted for the disparities in the findings between this research and those of the aforementioned prior studies.

Discussion of the Hypotheses

The study found significant differences in students' academic performance across the three selected Senior High Schools. The study established that students' academic performance in Prempeh College was better than those in Yaa Asantewaa Girls SHS and Assemblies of God SHS. Similarly, the academic performance of the students of Yaa Asantewaa Girls SHS was found to be better than the students in in Assemblies of God SHS.

Again, the study established that there is gender difference in academic performance among the students in the three selected SHSs in Kwadaso Municipality. This finding is in accord with the result of the study by Slavin (2010) which indicated that difference exist between male and females in their academic performance. The study further clarified that male students perform better than female students in the three selected SHSs in Kwadaso. This finding confirms the results of the respective studies by Afuwape and Oludipe (2013), Mari (2013), and Malik and Ibu (2013) who variously found that male students were better in their performance in Integrated Science, Biology and Mathematics than their female counterparts in schools. The finding, however, contradicts the respective finding by Were and Yalo (2012), and Brown and Kanyango (2014) who rather found females to perform better academically than the females. The distinction may be due to cultural differences in the setting of this study. Furthermore, this finding is in disagreement with the respective studies by Nuthanap (2015) and Balarabe and Abdullahi (2016) which did not establish any significant difference in the academic performance of male and female students.

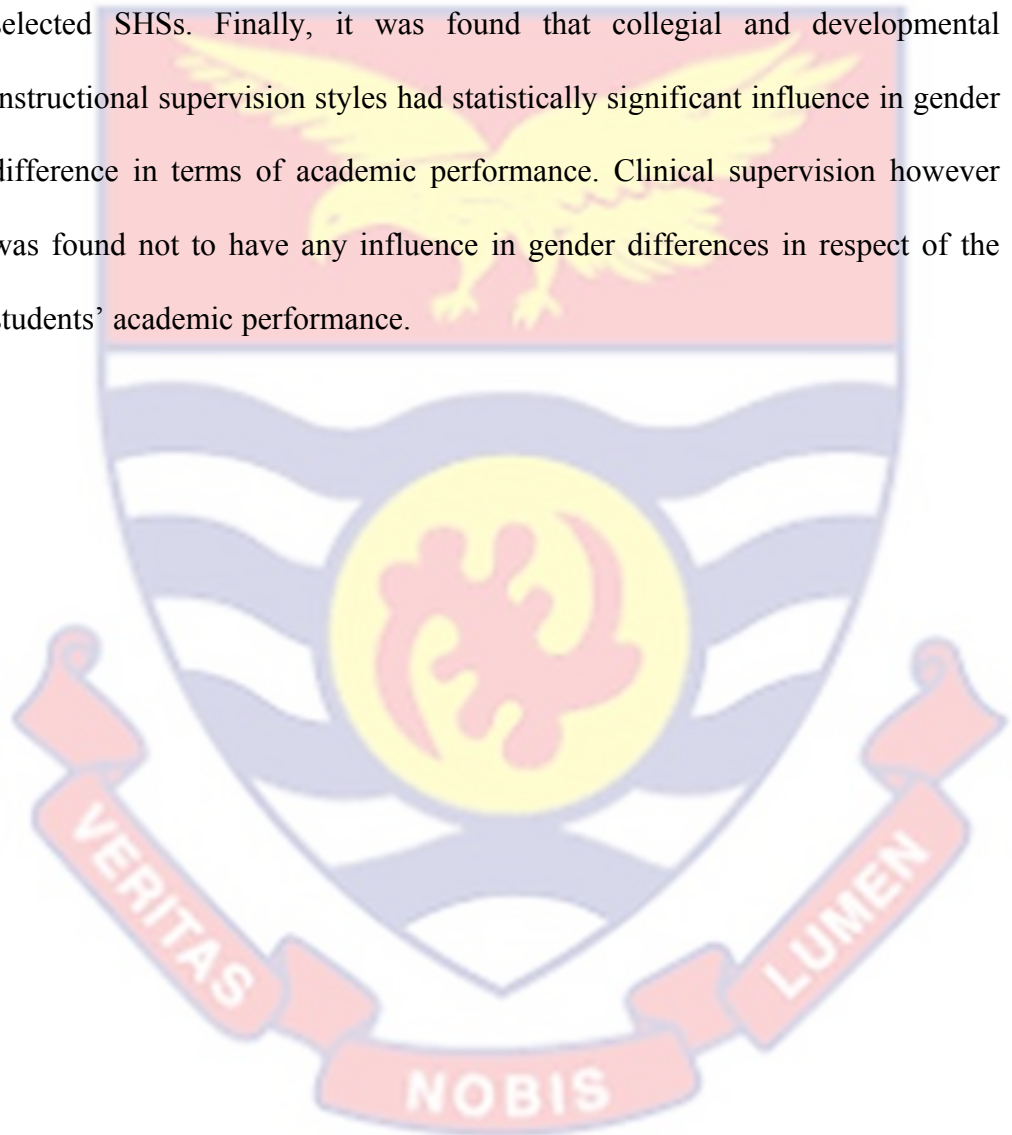
The study also found that collegial and developmental instructional supervision styles influenced gender differences in terms of academic

performance in the selected SHs in Kwadaso Municipality. This finding is in contradiction with the finding by individual studies of Okendu (2012) and Heaven and Bourne (2016) which collectively did not identify influence of instructional supervision on the difference in performance between male and female students in high school. On the contrary, the study found that clinical supervision style did not influence gender differences in academic performance in the selected SHSs in Kwadaso Municipality. This is in harmony with the result of the studies by Okendu (2012) and Heaven and Bourne (2016) which equally did not identify influence of instructional supervision on the difference in performance between male and female students in high school.

Summary

The chapter presented the results of the data collected and analysed, and the discussion made on the influence of instructional supervision on students' academic performance in three selected SHSs in Kwadaso Municipality. The data gathered were analysed using descriptive and inferential statistics and the results presented in tables. The results show that all the three instructional supervision styles (clinical, collegial and developmental supervisions) were applied in the selected SHSs. However, the most used supervision style among the three is clinical supervision style. Again, all the three supervision styles had positive influence on students' academic performance. However, developmental supervision style best predicts students' academic performance as it reduced students' numerical grade by 0.076 as against, 0.038 and 0.030 for clinical and collegial respectively. The results further show that the combined application of the

three instructional supervisions in the selected SHSs had positive influence on students' academic performance as they together reduced students' numerical grade by 0.29. Again, instructional supervision application was found to account for students' academic performance by 22 percent. The results equally show statistically significant differences in performance across the three selected SHSs. Finally, it was found that collegial and developmental instructional supervision styles had statistically significant influence in gender difference in terms of academic performance. Clinical supervision however was found not to have any influence in gender differences in respect of the students' academic performance.



CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

Overview of the Study

This research sought to examine the influence of instructional role of supervisors on academic performance of students in selected senior high schools in Kwadaso Municipality in Ashanti region of Ghana. Three Senior High Schools in the municipality were selected and these schools constituted the institutional scope of this study. The selected SHSs comprises Prempeh College, Yaa Asantewaa Girls Senior High School and Assemblies of God Senior High School. The work used descriptive survey design to achieve the specific research purposes and to test the hypothesis of the study. Stratified random sampling, purposive and systematic sampling techniques were used in selecting 603 supervisory staff, teaching staff and students from the three selected SHSs in Kwadaso Municipality. After using Krejcie and Morgan's (1970) table to determine the sample size of 603 staff and students from the staff and students' population of 7,276, stratified random sampling technique was applied to distribute this sample proportionately across the three selected SHSs.

Purposive sampling technique was later used for selecting all the instructional supervisor staff and the core subject teachers of the schools. This was done because the supervisory staff perform the instructional supervisory functions and could furnish the required responses to the questions concerning the style of instructional supervision they apply in their respective lines of duty. The core-subject teachers were also purposively selected since the students' tests results analysed for this study were those from their core subjects. Then, systematic sampling technique was applied in selecting the students for each school to be part of their sample size.

Questionnaire was the principal primary data collection instrument for this study. Secondary data on the students' academic performance were obtained from the students' results sheets of the academic department of the three SHSs in the Municipality. The questionnaire was pretested to ensure its validity and reliability. The Cronbach alpha Coefficient values for the supervisors' questionnaire pretested stood at 0.77 and that of the teachers was 0.75, indicating acceptability. Descriptive statistical tools and regression model were used in analyzing the data gathered. Specifically, the demographic information of the respondents was analysed using descriptive statistics and the results were presented in frequencies and percentages. Data on research purposes one to three regarding which instructional supervision styles used, which of the styles is most applied and, what challenges are associated with the application of the instructional supervision in the selected SHSs were analysed using descriptive statistic and displayed in means and composite indices. Data on research purposes four and five as well as the data on the

hypothesis tested were analysed using multiple regression model. Based on the data analysis, the following key findings from the studies emerged.

Summary of Key Findings

Concerning the first specific research purpose, the study found that greater majority of the respondents admitted that the supervisory staff of the three selected senior high schools applied all the three referent instructional supervision styles, viz, clinical, collegial and developmental instructional supervision.

In respect of specific research purpose two, majority of the respondents also consented that clinical instructional supervision style predominated other instructional supervision styles in usage by the schools' instructional supervisors. This dominant instructional supervisory style is characterized by: supervisors embarking on weekly instructional supervisory planning for their department or school; organisation of pre-observation conference by supervisors with the teachers to clarify and agree on the instructional actions and domains to be observed; supervisors' collaboration with the staff; supervisors' weekly visit to the classroom to observe and inspect teachers' instructional delivery to ascertain where support is required; and weekly organisation of classroom observation conference by the supervisors with the teacher to discuss observed instructional delivery practices that require improvement.

Again, respondents viewed collegial instructional supervision as the second most applied instructional supervisory style by the supervisors in the selected SHSs. Notable features of this instructional supervision style include:

instructional supervisor perceiving the teachers as their colleagues in their instructional supervisory approach; supervisors doing weekly planning with the teachers for their instructional delivery; permitting teachers to engage in peer instructional supervision and share experiences as to how to improve on their instructional delivery; supervisors' tasking the teachers to compare their schemes of work and lesson plans for the term and share views on the improved ways of preparing them for the enhancement of instructional delivery; supervisors' engaging their department to periodically do peer/group observation of one another's tutoring to assess themselves objectively for improved instructional delivery practices; and supervisors' tasking the teachers to compare their schemes of work and lesson plans for the term and share views on the improved ways of preparing them for the enhancement of instructional delivery

The study further revealed that developmental instructional supervision style is the last option of the three instructional supervision style used in the selected SHS. Its key features include supervisors: helping the teachers to identify their individual instructional needs and meeting them accordingly; operating different instructional supervisory methods for different teachers; developing and organizing different instructional delivery training programmes for teachers based on their shortcomings in specific classroom experiences observing teachers' classroom teaching methodology and suggesting other steps for the continuing improvement of instructional activities using varied strategies; designing and executing supervisory actions for the professional growth and development of teachers.

In respect of the specific research purpose three, it was revealed in the study that majority of the respondents agreed to three of the statement as the challenges associated with instructional supervision in the selected schools. They include the following: that the supervisors do not have enough financial motivation to supervise teachers' classroom instructional delivery; that Supervisors are not trained periodically to be abreast of modern instructional supervisory techniques; and also, teachers see themselves as masters of their subjects and do not see the need for supervision of their instructional delivery. Majority of the respondents, however, dismissed the following suggestions as challenges hindering the application of the instructional supervision in the schools: inadequate logistical support for the supervisors to effectively carry out their instructional supervisory duties; absence of school policy regarding instructional supervision of teachers; and teachers viewing instructional supervision as a victimization strategy and therefore uncooperative during supervision.

Concerning specific research purpose four, the study revealed that each of the instructional supervision style has statistically significant influence on students' academic performance in examination. For instance, clinical instructional supervision was found to have positive statistical influence on students' academic performance in English Language subject. Similarly, developmental supervision was found to have statistically positive influence on students' academic performance, in Core Science and Core Mathematics. Also, collegial supervision style was identified to have statistically positive influence on students' academic performance in Science Subject. The study further found that instructional supervision exerts moderately significant

influence on students' examination performance by reducing their numerical grade by an average of 0.29. This implies that application of instructional supervision results in improvement on students' academic performance. Again, it was found in the study that the three instructional supervision styles contribute significantly towards students' performance in examination by 20.2 percent.

About the specific research purpose five, the study revealed that developmental instructional supervision best predicts students' academic performance since its application reduces students' numerical grade by 0.076 point.

Finally, the hypothesis tested revealed statistically significant differences in performance across the three selected SHSs. Finally, it was found that collegial and developmental instructional supervision styles had statistically significant influence in gender difference in terms of academic performance. Clinical supervision however was found not to have any influence in gender differences in respect of the students' academic performance.

Conclusions

In the light of the above findings, the study concludes as follows:

Supervisors in the selected Senior High Schools in Asokwa Municipality are generally aware of the role of instruction supervision in propelling students' academic performance. They therefore employ all the three instructional supervision styles described and suggested by Glickman

(1995), Goldhammer (1980) and Glatthorn (1990). It is also concluded that clinical supervisory style is the most preferred among the three instructional supervision styles in the selected SHSs. It is also concluded that

It is again concluded that there are challenges associated with the use of the instructional supervision styles. Some of the challenges are caused by the teachers themselves and others by the school authorities. In this regard, both teachers and the school authorities must find a way of solving these challenges as soon as possible so that it does not negatively affect the academic performance of the students’.

Lastly, it is concluded that although the three instructional supervisory styles—clinical, collegial and developmental—may each have varying influences on Senior High Schools’ students’ academic performance in examinations from different subjects, their collective influence on the overall examination performance remain positive. This indicates that other factors may contribute towards SHS’ students’ academic performance in examinations, yet instructional supervision style used also play an important role in this respect.

Recommendations

Based on the findings and conclusions, the study offers the recommendations as follows.

First, Ghana Education Service, leadership and heads of second cycle institutions, especially, the leadership in the three selected SHSs in Kwadaso Municipality must be particularly attentive to the instructional supervision

styles used in the institutions because they have serious implication for students' academic performance. More specifically, the headmasters, the assistant heads and the departmental heads of the three selected SHSs in Kwadaso Municipality should apply more of developmental instructional supervision style in their supervisory function since it best predicts students' academic performance.

Refresher and in-service training programmes on the modern styles and techniques of instructional supervision should be organized by the Ghana Education Service (GES) for headmasters, assistant headmasters and departmental heads in SHSs to boost their instructional supervisory skills. The Kwadaso Municipal Education Directorate, the Municipal Assembly together with the GES should assist in organizing in-service training programme periodically for the selected SHSs' supervisory staff to enhance their supervisory skills. Additionally, the instructional supervisors must be financially motivated enough to encourage them to carry out effective and, most importantly, performance-driven instructional supervisions in senior high schools.

It is recommended again that the government through Ghana Education Service should develop instructional supervision policy manual for SHSs to provide support and guide for instructional supervisors in the executions of their functions. Again, teachers in second cycle institutions must be sensitized on the relevance of instructional supervision to their pedagogical improvement so that they would cooperate with their supervisors accordingly to enhance students' academic performance.

Furthermore, it is recommended that the leadership of Prempeh College, Yaa Asantewaa Girls SHS and Assemblies of God SHS should be mindful of the application of collegial and developmental instructional supervision styles. This is because the two styles of supervision have significant influence on gender differences in academic performance. They should re-strategize the application of collegial and developmental instructional supervision styles so as to bridge the gap of academic performance between the male and female students in the selected schools. It is also recommended that the leadership of these three selected SHSs should emphasize the application of clinical instructional supervision style since it does not determine difference between the academic performance of male and female students.

Finally, universities and other academic institutions mandated to train teachers for second cycle schools should emphasize to the teachers on how important these instructional supervision styles are in influencing their students' academic performance. By doing so, the teachers' will identify the best instructional supervision style suitable to improve the academic performance of their students.

Suggestion for Further Study

Whilst instructional supervision practices were found to have moderately significant positive influence on students' academic performance in SHS level, it is important to note the study was restricted to only three of the hundreds of the Senior High Schools in Ghana. A regional or national study could be carried out to determine how instructional supervision styles

influence the academic performance of students in Senior High Schools in Ghana. Again, this study could be replicated at the Junior High School level using a larger scope. Further study can also be commissioned on the topic “Instructional Supervision Practice and Teachers’ Pedagogical Performance.”



REFERENCES

- Aaronson, D., L. Barrow, & W. Sander (2017) “Teachers and student achievement in the Chicago public high schools”, *Journal of Labour Economics*, 25(1), 95–135.
- Abdille, Y. A. (2012). *Institutional factors influencing instructional supervision in public secondary schools, Mandera West district* (Master of Education Thesis). University of Nairobi, Nairobi.
- Abdinoor, I. (2013). *Social Economic, social cultural and school-based factors affecting the performance of KCPE in Isiolo County* (Master of Education Thesis). Kenyatta University, Nairobi.

- Acheson, K. A. & Gall, M. D. (1987). *Techniques in the Clinical Supervision*
- Ackers, J., & F. Hardman (2011). *Classroom Interaction in Kenyan Primary Schools*. British Association for International & Cooperative Education 31(2), 245-261.
- Adikinyi, J. W. (2007). *Teachers' perception on the role of QASO on quality of education in Nairobi public secondary schools* (Master of Education Thesis). University of Nairobi, Nairobi.
- Afuwape, M. O., & Oludipe, D. I. (2013). Gender differences in integrated science achievement among pre-service teachers in Nigeria. *Educational Research and Review*, 3(7), 242-24
- Aggarwal, Y.P. & Sachdeva, M.S. (2007). *Educational administration and supervision*. Ludhiana: Vinod Publications
- Akinwumi, F. S. (2016). Mode of supervision and teacher productivity. *Nigerian Journal of Clinical and Counselling Psychology*. 8(2), 219-228.
- Akiri, A. A., & Ugborugbo, N. M. (2012). An examination of gender's influence on teachers' productivity in secondary schools. *Journal of Social Sciences*, 17(3), 185-191.
- Akyeampong, K. (2016). Revisiting free compulsory universal basic education (FCUBE) in Ghana. *Comparative Education*, 45 (2), 175-195.
- Alessandri, G., & Cepale, G. (2020). Self-set goals improve academic performance through nonlinear effects on daily study performance. *Learning and Individual Differences*, 77(101), 78-84
- Alimi, O. S., & Akinfolarin, C. A. (2012). Impact of selected modes of

instructional supervision activities on students' academic performance in senior secondary schools in Ondo state, Nigeria. *Education Research Journal*, 2(1): 1 – 6.

Anderson, R. H., Goldhammer, R., & Krajewski, R. J. (1993). *Clinical supervision: Special methods for supervision of teachers* (3rd ed.). Holt, Rinehart & Winston.

Ankoma-Sey, V. R., & Maina, B. (2016). The Role of Effective Supervision on Academic Performance of Senior High School. *Research on Humanities and Social Sciences*, 5(4),73-83.

Anastas, J. W. (2009). *Research Design for Social Work and the Human Services* (2nd ed). Columbia University Press.

Apple, F. & Sunder, J. A. (2016). *Reading, understanding, and applying research: A text and workbook*. New Delhi: Sage Publications, Inc.

Archibong, F.I. (2013) Strengthening Internal Quality Assurance for Improved Education, Delivery In Nigerian Public Universities. *Research on Humanities and Social Sciences*, 3(1), 213—295.

Archibong, F.I. (2010). Instructional supervision in the administration of secondary education: A panacea for quality assurance: *European Scientific Journal* , 8(13), 454-577.

Argina, A. W., Mitra, D., Ijabah, N., & Setiawan, R. (2017). Indonesia pre-tertiary schools' quality standard: The role of instructional supervision and the PISA result. *Proceedings Education and Language International Conference*, 1(1), 69–79.

<http://jurnal.unissula.ac.id/index.php/ELIC/article/view/1212>

- Aseltine, J. M., Faryniarz, J. O., & Rigazio-Digilio, A. J. (2006). *Supervision for Learning: A Performance-Based Approach to Teacher Development and School Improvement*. Alexandria: ASCD.
- Ayeni, A.J (2011) Teachers' professional development and quality assurance in Nigerian secondary schools. *World Journal of Education, 1(2)*, 22-29
- Balduf, E. H. (2009). *Educational performance of the poor: Lesson from the Rural North EastBrazil*: Oxford University press.
- Balarabe, M., & Abdullahi, A. L. (2016). Gender, academic prediction and achievement in Nigerian Schools. *Journal of the Department of Education, Ahmadu Bello University, Zaria, 2(1)*, 82-92.
- Bauer, S. M. (2003). *Creating effective teachers: The role of instructional supervision*. AACTE Publications.
- Baines, D., Charlesworth, S., & Turner, D. (2014) Lean social care and worker identity: the role of outcomes, supervision and mission. *Critical Social Policy, 34 (4)*, 433-453
- Birago, Y. R. (2015). School Culture and its Implication on the Education of Pupils: A Case of Patasi M/A Junior High School in Kumasi, Ghana. Unpublished Thesis for the UCC.
- Bessong, T. And Felix, O. (2009). Supervision as an instrument of teaching-learning effectiveness: Challenge for the Nigerian practice. *Global Journal of Educational Research, 8(29)*, 15-20
- Bossey, M. A. & Chan, J.k. (2012). The influence of examinations on the stated curriculum Goals. *American International Journal of Contemporary Research, 2(2)*, 179-182.

Bray, M. (2008). *The shadow education system: private tutoring and its implications for planners*. Paris: UNESCO.

Blasé, J., & Blasé J. (2014). *Handbook Of Instructional Leadership: How Successful Principals Promote Teaching And learning (2nd Ed.)*. Thousand Oaks, Ca: Corwin press.

Beddoe, L. (2010). Surveillance or reflection: professional supervision in 'the risk society'. *British Journal of Social Work*, 40(4), 1562-1588

Blumberg, P., & Weimer, M. (2016). *Developing Learner-Centred Teaching: A Practical Guide for Faculty*. San Francisco: Jossey-Bass Publishers.

Brown, A., & Bourne, I. (2009). *The social work supervisor*, Buckingham: Open University Press

Brown, L. I., & Kanyango, G. Y. (2014). Gender differences in mathematics performances in Trinidad and Tobago: Examining affective factors. *International Electronic Journal of Mathematics Education* 5(3), 113-130.

Bucknell, D. (2016). *Outcome focused supervision*, in H Reid and J Westergaard (eds) *Providing support and supervision:*

an introduction for professionals working with young people.

Bush, T. (2003). *Theories of educational management* (3rd ed.): Sage Publications Ltd.

Byabagambi, J. (2007). *Assessment of the impact of instructional supervision on secondary school teachers' professional practices in Kabale District*. (Thesis). Makerere University, Kampala.

Chapman, C. (2011). Unlocking the potential: inspection as a mechanism for school improvement. *Improving Schools*, 4(3), 41-50.

- Chapman, C. (2014). Unlocking the potential: inspection as a mechanism for school improvement. *Journals for Improving Schools*, 5(4), 21–25.
- Charles, T., Chris, K. K., & Kosgei, Z. (2012). The influence of supervision of teachers' lesson notes by head teachers on students' academic performance in secondary schools in Bureti District, Kenya. *Journal of Emerging Trends in Educational Research and Policy Studies*, 3(3), 299–306.
- Comfort, A., Aina, B. C., & Idowu, A. F. (2017). Academic supervision as a correlate of students' academic performance in secondary schools in Ekiti State, Nigeria. *International Journal of Educational Policy Research and Review*, 4(1), 8–13.
- Copeland, W. D. (2012). Student Teachers' Preference for Supervisory Approach. *Journal of Teacher Education*, 33(2), 32–36.
- Carpenter, J., Webb, C., & Bostock, L. (2012). SCIE Research Briefing 43: Effective supervision in social work and social care, London: SCIE.
- Carpenter, J., Webb, C. & Bostock, L. (2013). The surprisingly weak evidence base for supervision: Findings from a systematic review of research in child welfare practice (2000-2012), *Child and Youth Services Review*, 3 (11),143153.
- Comfort, A., Aina, B. C., & Idowu, A. F. (2017). Academic supervision as a correlate of students' academic performance in secondary schools in Ekiti State, Nigeria. *International Journal of Educational Policy Research and Review*, 4(1), 8–13.
- Cousins, C. (2010). 'Treat me don't beat me'...exploring supervisory roles of school heads and their effect on performance management. *Journal of Social Science and Management*, 22 (5), 281-292.

Cogan, M. L. (1973). *Clinical supervision*. Houghton-Mifflin.

Creswell, J. W. & Guetterman, K. (2019). *Research design: qualitative, quantitative and mixed methods approaches* (3rd ed.). Los Angeles: Sage Publications.

Creswell, J. and Creswell, D. (2013). *Research design: Qualitative, quantitative and mixed method approach* (3rd ed.). Thousand Oaks, CA: SAGE publications.

Dangara, Y. U. (2015). The Impact of Instructional Supervision on Academic Performance of Secondary School Students in Nasarawa State, Nigeria. *Journal of Education and Practice*, 6(10), 160–167.

Dareh, J. C. (2013). *Supervision as Proactive Leadership*. Waveland Press Inc.

Danielson, C. (2010). New trends in teacher evaluation. *Educational Leadership*, 58(5), 12- 15.

Davys, A., and Beddoe, L. (2010). *Best Practice in Professional Supervision*, Jessica Kingsley.

De-Grauwe, A. (2016). Educational planning for the 2030 agenda. *International Institute for Educational Planning Letter*, 32(2): 1-3.

De-Grauwe, A. (2007). Transforming School Supervision into a Tool for Quality Improvement. *International Review of Education*, 53(6), 74–79.

Dipola, K. & Hoy, M. (2013). Challenges of pre-tertiary school headship and school performance Practices in Bangkok. *Journal of Educational Research*, 24(5), 758-761

Dipaola, M., & Hoy, W. K. (2013). *Principals Improving Instruction:*

Supervision, Evaluation, and Professional Development.

Charlotte, NC: Information Age Publishing.

Elacqua, G. (2016). Building More Effective Education Systems. In S. Kuger, E. Klieme, N. Jude, & D. Kaplan (Eds.), *Assessing Contexts of Learning: An International Perspective* (pp. 375–394). Cham: Springer International Publishing.

Eisner, E. (2012). The kind of schools we need. *Phi Delta Kappan*, 83(8), pp.576-583.

Eerweil, J. Groff, T. L., & Haas (2012). Supervising and appraising well: A guide to effective supervision and appraisal for those working in social care, Cardiff: Care Council for Wales. *Journal of Social Science and Management*, 27(7), 181-292.

Flora, K. O., (2014). Relationship between instructional supervisory practices by principals and academic performance in public secondary schools in Nakuru Municipality, Kenya. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)* 19(11), 27-31

Fitzgerald, A. (2011). *The importance of technical education and training.* World Bank Group.

Fisher, C. F. (2011). Supervision of Instruction. Retrieved from www.stanswartz.com/adminbook/chap.3.htm. Jan.25,2020

Frawley, O. M., & Sarnat, J. E. (2011). *The supervisory relationship: A contemporary psychodynamic approach.* Guilford Press,

Gachoya, E. W. (2008). *Impact of quaso on education quality in secondary schools in Nyeri south District* (Master of Education Thesis). University of Nairobi,

GES SHS Classification Manual (2019). *Ghana Education Service Senior High*

School Classification Manual for School Selection.

Glickman, C. D., Gordon, S. P., & Ross-Gordon, J. M. (1998). *Supervision of instruction: a development approach (4th Ed.)* Needham, Ma: Allyn And Bacon.

Glickman, C. D. (1995). *A developmental approach to supervision of instruction.* Allyn and Bacon.

Garman, N. B. (2002a). Conflicting conceptions of clinical supervision and the enhancement of professional growth and renewal: Point and counterpoint.

Journal of Curriculum and Supervision, 2.

Garman, N. B. (2002b). The clinical approach to supervision. *A S C D Yearbook.*

Garman, N. B. (2000). *Clinical supervision: Special methods for the supervision of teachers.* Holt, Rinehart, & Winston.

Glatthorn, A.A. (1984). *Differential Supervision.* Alexandria, Va: Association For Supervision and Curriculum Development.

Gordon, S. P. (1996). Developmental supervision: An exploratory study of a promising model. *Journal of Curriculum and Supervision, 5*, 293-307.

Goldsberry, L. F. (1998). Teacher Involvement in Supervision. In F. Gerald & E. Pajak (Eds.), *Handbook of Research on School Supervision* (p.428-462). Ny: Simon And Schuster Macmillan.

Goldhammer, R. L. (1969). *Clinical supervision: Special methods for the supervision of teachers.* New York; Holt, Rinehart, & Winston.

Goldhammer, R. L. (1980). *Clinical supervision: Special methods for the supervision of teachers* (2nd ed.). Holt, Rinehart, & Winston.

Government of Ghana Report (2010). Education in Ghana: Improving Equity, Efficiency and Accountability of Education Service Delivery. Report No. 59755-GH.

Glanz, J. (2012). Teachers' attitude of principals' collaboration in instructional supervision. *International Research Journal of Education*, 2(3), 67–81.

Gaziel, H. M. (2007). Re-examining the relationship between principal's educational leadership and students' achievement. *Journal of Social Science*, 15(1): 17-24

Glanz, J. (2007). Teachers' attitude of principals' collaboration in instructional supervision. *International Research Journal of Education*, 2(3), 67–81.

Glickman, C. D. (2010). *Supervision of instruction: A developmental approach* (2nd ed). Allyn & Bacon.

Glickmann, C., Gordon, S. Ross-Gordon. J (2010). *Supervision: and Instructional Leadership*. (8th Ed). Needham Heights, MA: Allyn & Bacon.

Glickman, C.D., Gordon, S.P., and Ross-Gordon, J.M. (2005). *The basic guide to superVision and instructional leadership*. Boston, Mass: Pearson Education, Inc.

Glickman, C. D. (2010). *Supervision of instruction: A developmental approach* (2nd ed). Allyn & Bacon.

Glickman, H. S. (2010). Everyone can win: responding to conflict constructively in the teaching profession, Sydney: Simon and Schuster.

- Glickman, D., Gordon, S. P., & Gordon, M. R. (2013). *The basic guide to supervision and instructional leadership*. Pearson Education.
- Glickman, C.D., Gordon S.P., and Ross-Gordon, J.M. (2008). *Instructional Supervision: A Developmental Approach*, 4th ed. Boston: Allyn & Bacon.
- Glickman, C. & Ross-Gordon, J. (2004). *SuperVisual and Instructional Leadership. A Developmental Approach*, (5th ed.) Needham Heights, Massachusetts: Allyn & Bacon
- Gordan, N., & Ross-Gordan, L. (2014). Educational leadership and instructional supervision styles effectiveness in high schools in Chile. *Journal of Educational Research*, 23(7), 157-163.
- Hamre, B. K., & Pianta, R. C. (2011). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Society for research in Child Development*, 72(2), 625-638.
- Hawkins. W. J & Shoet, E. G. (2012). Using supervision to deal with bullying experiences and compromised academic performance across middle school. *The Journal of Early Adolescence*, 31(1), 52-73.
- Harbison, R. N., & Hanushek, E. A. (2011). *Educational performance of poor: Lesson from the rural north east Brazil*. London: Oxford University Press.
- Harkin, R. S. & Webb, S. (2016). Effectiveness of multimedia approach on the academic achievement of high school students in English. *International Journal of Applied Research*, 1(9), 467-471.
- Hauser, P. M. (2006). The Use of Sampling in the Census. *Journal of the American Statistical Association*, 36(215), 369-375.
<https://doi.org/10.2307/2279611>

Heaven, G., & Bourne, P. A. (2016). Instructional Leadership and Its Effect on Students' Academic Performance. *Review of Public Administration and Management*. <https://doi.org/10.4172/2315-7844.1000197>

Heyneman, S. P. (2009). Influences on Academic Achievement: A Comparison of Results from Uganda and More Industrialized Societies.

Sociology of Education, 49(3), 200– 211.

Haringey, M. H. (2009). English language teachers' perceptions of educational supervision in relation to their professional development: A case study of Northern Cyprus. *Research on Youth and Language*, 3(7), 16–34.

Hallenger, P, Buckman, M. M and Davis. F. (2015). What influences a teacher's decision to leave or remain in teaching? A case of DR John Garang memorial and Juba Day secondary schools in Juba County central Equatoria State, Republic of South Sudan. *Africa Journal for Educational Review*, 30(2), 13-16.

Hamlet, C. L. & Powell, S. R. (2006). The effects of computer-assisted instruction on number combination skill in at-risk first graders. *Journal of Learning Disabilities*, 39(5), 46-47.

Harvey, A., & Henderson, F. (2014). Reflective supervision for child protection practice - reaching beneath the surface, *Journal of Social work Practice, Psychotherapeutic Approaches in Health, Welfare and the Community*, 28 (3), 343-356.

Higgins, M., Morton, A. E., & Wolkenhaur, R. (2018). Reconceptualizing preservice teacher supervision through duoethnography: Reflecting, supporting, and collaborating with and for each other. *Teaching and Teacher Education*, 69, 75–84. <https://doi.org/10.1016/j.tate.2017.09.020>

Holifield, W. & Cline, J. L. (2007). Rethinking clinical instructional leadership roles of the school principal: Challenges and prospects. *The Journal of Educational Thought (JET) / Revue de La Pensée Éducative*, 35(3), 269-295.

Hughes, L., and Olney, F. (2012). *Supervision: the interdependence of professional experience and organisational accountability*, London: Karnac Books Ltd.

Ibrahim, A. S. (2013). Approaches to supervision of student teachers in one UAE teacher education program. *Teaching and Teacher Education*, 34(3), 38–45.

Isaiah, J. M. & Isaiah, P. (2014). Strategies for improving the academic performance of students in botswana secondary schools. *World Journal of Educational Research*, 3(1), 157.

Jahanian, R., & Ebrahimi, M. (2013). Principles for Educational Supervision and Guidance. *Journal of Sociological Research*, 4(2), 380.

Jared, N. B. (2011). *Influence of Head Teachers' General and Instructional Supervisory Practices on Teachers' Work Performance in Secondary Schools in Entebbe Municipality, Wakiso District, Uganda* (Master of Education Thesis). University, Kampala. <https://eric.ed.gov/?id=ED527043>

Kabui, S. K. (2013). *Institutional factors influencing pupils' performance in kenya certificate of primary education in public primary schools in Naivasha Central Division, Kenya* (Thesis). University of Nairobi, Nairobi.

<http://erepository.uonbi.ac.ke:8080/xmlui/handle/11295/56322>

- Kamindo, C. M. (2008). *Instructional supervision in an era of change: Policy and practice in primary education in Kenya* (Doctoral). Durham University, <http://etheses.dur.ac.uk/2195/>
- Kemmis, S., Heikkeinen, H. L. T., Franson, G., & Aspfors, J. (2014). Mentoring of new teachers as contested practice: Supervision, support, and collaborative self-development. *Teaching and Teacher Education*, 43, 154–164. <https://doi.org/10.1016/j.tate.2014.07.001>
- Klenke, J. P., Martin, D. G., & Wallace, R. B. (2016). *Educational Research: An Introduction* (7th ed). Boston: Allyn & Bacon.
- Krejcie, R.V. & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.
- Ko, J, Sammons, P. & Bakkum, L. (2013). Effective teaching: a review of research and evidence Reading: CfBT Education Trust.
- Kimosop, M. K. (2007). *A study of the role of the headteachers' instructional supervision in Kabarnet and Salawa Division of Baringo District* (Thesis). University of Nairobi,
- Ikegbusi, N., & Eziamaka C. (2016). The impact of supervision of instruction on teacher effectiveness in secondary schools in Nigeria. *International Journal of Advanced Research in Education & Technology (IJARET)* 3(3), 16-20
- Kilminster, S. M., & Jolly, B. C. (2009). Effective supervision in clinical practice settings: A literature review. *Medical education*, 34(10), 827-840
- Kamindo, C. M. (2008). *Instructional supervision in an era of change: Policy and practice in primary education in Kenya* (Doctoral). Durham University, <http://etheses.dur.ac.uk/2195/>

Kinuthia, W. (2009). Educational Development in Kenya and the Role of Information and Communication Technology. *International Journal of Education and Development Using ICT*,5(2).

<http://ijedict.dec.uwi.edu/viewarticle.php?id=740&layout=html>

Kinyua, J. M. (2010). *Influence of secondary school principals instructional supervision practices on KCSE performance in Kasikeu Division, Mukaa District, Kenya* (Master of Education Thesis). University of Nairobi, Kenya.

Kwadaso Municipal Composite Budget (2021). *Kwadaso municipal assembly composite budget for 2021 fiscal year*.

Kothari, C. (2014) *Research Methodology, Methods and Techniques*. New Delhi: International P Limited.

Laming, E. D. (2009). Peer supervision, teacher incentives, and the impact of tracking: Evidence from a randomized evaluation in Kenya. *American Economic Review*, 101(5), 1739–1774.

Lawlor, G. (2013). *Differentiated instructional supervision and instructional strategies: One size doesn't fit all*. London, Corwin press.

Lyons, B. (2010). *Principal Instructional Leadership Behaviour, as Perceived by Teachers and Principals at New York State Recognized and Non Recognized Middle Schools*. Unpublished PhD dissertation, Seton Hall University.

Lezotte, L. W. (2010) *What effective schools do: re-envisioning the correlates*.

Indianapolis, *in: Solution Tree: The effective schools movement*. Okemos, MI: Effective schools products, Ltd.

Malik, A. E., & Ibu, J. E. (2013). Analysis of students' performance in junior secondary school mathematics examination in Bayelsa State of Nigeria. *Stud Home Comm. Sci.* 3(2), 131-134

Manas R.P. (2012). Implementation of Instructional Supervision in Secondary School: Approaches, Prospects and Problems: *Science, Technology & Arts Research Journal*, 1(3), 59-67.

Marczely, B. (2001). Supervision In Education: A Differentiated Approach With Legal Perspectives. Gaithersburg, Md: Aspen.

Mari, J. S. (2013). Gender-related differences in achievement in biology among senior secondary schools' students. *Zaria Journal of Studies in Education*, 3(2), 118-122.

Mankoe, J. O. (2002). *Educational administration and management in Ghana*. Accra, Afram Publishing.

Middleman, R., & Rhodes, G. (2009). Teaching the practice of supervision, *Journal of Education for Social Work*, 16 (3), 51-59.

Mimi, G., Nor, T., Lai, R. & and Kahirol, H. (2015). *Basic Research Methods: An Entry to Social Science Research.*: Sage Publications, Inc.

Mzee, G. W. (2011). *Influence of headteachers' characteristics in performing the administrative tasks in public secondary schools in Nairobi North District, Kenya*

Nairobi <http://erepository.uonbi.ac.ke:8080/xmlui/handle/11295/3187>

Morrison T and Wonnacott J (2010) Supervision: Now or never: Reclaiming reflective supervision in social work. *International Journal of Social Science*, 45(5), 50—56. <http://www.in-trac.co.uk/supervision-now-or-never/>

Mohanty, J. (2008). *Educational management supervision school organisation*. Neel Kamal Publications.

Monroe, P. (1913). *A cyclopedia of education*. Macmillan.

Moswela, C., & Mphale, J. (2015). Educational work supervision: An exploration of the current challenges in a rapidly changing social, economic and political environment. *Journal of Social Work, 9*(3), 345-358.

Mogire, J. K. (2010). Role of headteachers' instructional supervision on Kenya certificate of primary education performance in Public Primary Schools, Dagoretti District. *Journal of Educational Research, 23*(5), 30-35.

Muriithi, G. M. (2012). Cloud computing in higher education: Implications for South African public university. *Educational Research Journal, 8*(3), 74-75.

Mugenda, O. M. (2009). *Research methods: Quantitative and qualitative approaches*. ACTS.

Ndebele, C. M. (2013). Exploring the supervision terrain in basic education: Possibilities and threats. *Journal of Social Sciences, 35*(2), 149-158

Nurudeen, A., Abdul, B. A. R., Wan M., and Abdul-Rah A. (2018). The Free Senior High Policy: An Appropriate Replacement to the Progressive Free Senior High Policy: *International Journal of Education & Literacy Studies*, ISSN: 2202-9478

Nuthanap, G. (2015). Gender analysis of academic achievement among high school student. http://www.etd.uasd.edu/ft/th_9534.pdf

Nakpodia, E.D. (2006) *Educational Administration: A New Approach* (2nd Edn), Warri: Jonokase Publishers, Pp. 181-215.

Ndung'u, L. W. (2015). *School based factors influencing head teachers' instructional supervision practices in public secondary schools in Kiambu County, Kenya* (Master of Education Thesis). University of Nairobi,

Ndung'u, S. N. (2015). *Effects of teacher lesson preparedness on student performance in selected secondary schools in Kirinyaga South sub-county*. (Thesis).

Nyamwamu, N. M. (2010). *The effectiveness of instructional supervision by secondary school head teachers for curriculum implementation in Kajiado North district* (Thesis). Catholic University of Eastern Africa.

Nakamoto, J., & Schwartz, D. (2010). Is peer victimization associated with academic achievement? A meta-analytic review. *Social Development, 19*(2), 221–242.

Nurdyansyah, R., Rais, P., & Aini, Q. (2017). The role of education technology in mathematic of third grade students in MI Ma'arif Pademonegoro Sukodono. *Madrosatuna: Journal of Islamic Elementary School, 1*(1),37–46.

Nolan, T. & Hoover, S. D. (2004). Instructional Supervision: The Policy-Practice Rift. *The Journal of Educational Thought (JET) / Revue de La Pensée Éducative, 35*(1), pp.83–108.

Nolan, J. Hawkers, P.& Francis, E. (2003). Conceptions of supervision and leadership: Change and continuity. In G. Caweti (Ed.), *Challenges and achievements of American education*. Alexandria, VA: Association for Supervision and Curriculum Development.

Noble, P. O. & Smith, J. E. (2015). *Practical Research*. (8th Edition), United States of America: Pearson Prentice Hall.

Isaiah, N. N., & Isaiah, E. (2014). Relationship between principals' instructional supervision and students' academic achievement in sciences in

secondary schools in Botswana. *International Journal of Scientific & Engineering Research*, 7(9), 1586-1591

Okendu, J.N. (2012). The influence of instructional process and supervision on academic performance of secondary school students of Rivers State, Nigeria.

Academic. Research international journal 3(1), pp.147-151.

Onyango, O. P. (2005). *The relationship between principals' management of curriculum and KCSE performance in Migori District* (Thesis). University of Nairobi,

Onwueghbuzie, A.J., & Teddlie, C. (2003). A framework for analyzing data in mixed methods research. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 351-383. Thousand Oaks, CA: Sage.

Poirier O. D. (2009). A Principal's and Teachers' Perceptions and Understandings of Instructional Leadership: A Case Study of One School. University of Saskatchewan saskatoon.

Rossow, L. F., & Warner, L. S. (2000). *The Principalship: Dimension in Instructional Leadership* (2nd Ed.). Durham, Nc: Carolina Academic Press.

Rodgers, S. & Jenkins, L. (2010). Collegial and clinical instructional supervision to improve the effectiveness of teachers and performance of students in educational institutions. *Procedia - Social and Behavioral Sciences*, 29, 1169–1178.

Reeves, D. B. (2012). *The daily disciplines of leadership: How to improve student achievement, staff motivation, and personal organization*. San

Francisco: Jossey-Bass.

- Richardson, L.M. (2007). Helping teachers participate competently in school leadership. *The Clearing House*, 76(4), 202-205.
- Reigeluth, C. M. (2013). *Instructional design theories and models: An overview of their current status*. Rutledge Publishers.
- Robertson, B. (2010). *The language of teaching*. London: Heinemann publishers.
- Shah, N.Y. (2017). Instructional Supervisory Practices: Teachers' preferences and their effectiveness in public secondary schools in Mumbai. *Journal of Education and Practice*, 8(13), 243–247.
- Suhr, D. D. (2007). *Principal component analysis versus explanatory factor analysis* (Paper 203–230, pp. 1–11). Greeley: University of Northern
- Sileo, J. M. (2011). Co-teaching: Getting to know your partner. *Teaching Exceptional Children*, 43(5), 32-38.
- Strauss, A., & Corbin, J. (1994). Grounded theory methodology: An overview. In N.K.
- Segun, O., (2004). *Educational Supervision: Perspective and practice in Nigeria*. Ile-Ife: University.
- Sergiovanni, T. J. & Starratt, R. (2002). *Supervision: A redefinition*. MacGraw-Hill.
- Sergiovanni, T.J. (2007). Toward a theory of clinical supervision. *Journal of Research and Development in Education*, 9(2), 20-29.
- Slavin, R. E. (2010). *Educational psychology theory and practice (9th ed.)*. New Jersey: Pearson Educ. Inc

Smyth, B. N. (1984b). Clinical supervision: Some signs of progress. *Texas Tech Journal*, 7(3), 351.

Smyth, B. N. (1984a). *Clinical supervision: Research in schools utilizing comparison measures*. Paper presented at an annual meeting of the American Educational Research Association, Chicago, IL. (ERIC Document Reproduction Services No. Ed 255 516).

Smith, K. J. (2004). Clinical supervision in the millennium. *Education Leadership*, 38, 521-525.

Sergiovanni, T. J., & Starratt, R. J. (2007). *Supervision: A redefinition*. McGraw-Hill.

Schnabel, K. U., & Alfeld, C. (2012). Parental influence on students' educational choices in the United States and Germany: Different ramifications—same effect? *Journal of Vocational Behaviours*, 60(2), 178–198.

Shantz, D & Ward, T. (2000). Feedback, conservation and power in the field Experience of pre-service teachers. *Journal of Instructional Psychology*, 27 (4), 288- 294.

Sawilowsky, S. S. (2005). Misconceptions leading to choosing the t test over the Wilcoxon Mann-Whitney test for shift in location parameter. *Journal of Modern Applied Statistical Methods*, 4, 598–600.

Sule, M. (2013). The influence of the principals' supervisory demonstration strategy on teacher's job performance in Nigeria secondary schools. *IQSR journal of Humanities and Social Science*, 2(1), pp.39 - 44.

Sule, M. A., Eyiene, A., & Egbai, M. E. (2015). Instructional supervisory practices and teachers' role effectiveness in public secondary schools in

Calabar South Local Government Area of Cross River State, Nigeria.

Journal of Education and Practice, 6(23), 43–47.

Students Performance Analysis Sheet for YAGSHS (2017). Yaa Asantewaa Girls Senior High School: WASSCE performance analysis sheet for 2017 candidates.

Students Performance Analysis Sheet (2017). Prempeh College: WASSCE Performance analysis sheet for 2017 candidates.

Students Performance Analysis Sheet for AGSHS (2017). Assemblies of God Senior High School: WASSCE Performance Analysis Sheet for 2017 candidates.

Thomas, O. O., & Israel, O. O. (2014). Effectiveness of animation and multimedia teaching on students' performance in Science Subjects. *British Journal of Education, Society & Behavioural Science*, 4(2), 201–210.

Tyagi, R. S. (2010). School-based instructional supervision and the effective professional development of teachers in government senior secondary schools in India. *International Journal of Leadership in Education*, 22(2), 237-249

Tesfaw, T. A., & Hofman, R. H. (2014). Relationship between instructional supervision and professional development. *International Education Journal: Comparative Perspectives*, 13(1), 82–99.

Taber, D. A. (2018). *Research design in social research*. London: Sage Publications, Inc.

UNESCO, (2008). EFA Global monitoring report 2008. Paris: UNESCO.

Usman, Y. D. (2015). The impact of instructional supervision on academic performance of secondary school students in Nasarawa State, Nigeria. *Journal of Education and Practice*, 6(10), 160–167.

Veloo, A., Komuji, M. M. A., & Khalid, R. (2013). The effects of clinical supervision on the teaching performance of secondary school teachers Khalifa City, Abu Dhabi. *Procedia - Social and Behavioral Sciences*, 93, 35–39.

Wawira, M. (2012). Headteachers' characteristics influencing instructional supervision in public primary schools in Kasarani Division, Nairobi. *Journal of Academic Leadership*, 12(6), 26-33.

Wild-Tuominen, V., & Korhonen, R. (2018). Young children's engagement with digital technologies in the family context: A Case of Lithuania. *International Journal of Smart Education and Urban Society*, 9(4), 90-101

Wall, D. J., & Hurie, A. H. (2017). Post-observation conferences with bilingual pre-service teachers: revoicing and rehearsing. *Language and Education*, 31(6), 543–560.

Watene, D. N. (2007). *A study of teachers' perception on the supervisory duties of primary school head teachers in Olkalou division of Nyandarua* (Master of Education Thesis). University of Nairobi, Nairobi.

Wellington, J. (2011). *A study of teachers' perception on the supervisory duties of primary school head teachers in Olkalou division of Nyandarua* (Master of Education Thesis. Roma: National University of Lesotho.

Were, C. M., & Yalo, J. A. (2012). Gender differences in self-concept and academic achievement among visually impaired pupils in Kenya. *Educational Research*, 1(18), 246-252

- Willegems, V., Consuegra, E., Struyven, K., & Engels, N. (2017). Teachers and pre-service teachers as partners in collaborative Supervision: A systematic literature review. *Teaching and Teacher Education*, 64, 230–245.
- Wiyono, B. B., Kusmintardjo, & Sucipto. (2017). The effective supervision techniques that influence teacher's performance. *Man in India*, 97(24), 25–33. https://serialsjournals.com/abstract/33975_3.pdf
- Yunus, Y. I. (2008). School principals' roles in teaching supervision in selected schools in Perak. *Asian Journal of Business and Management Sciences*, 3(1), 50–55.
- Zaare, M. (2013). An Investigation into the effect of classroom observation on teaching methodology. *Procedia - Social and Behavioral Sciences*, 70, 605–614.
- Zepeda, S.J. (2007). Linking portfolio development to clinical supervision: a case study. *Journal of Curriculum & Supervision*, 18(1), 83-100.
- Zepeda, S. J., & Ponticell, J. A. (1998). At Cross-Purposes: what Do Teachers Need, Want, And Get From Supervision? *Journal Of Curriculum Ans Supervision*, 14(1), 68-87

APPENDIX A:

QUESTIONNAIRE FOR SUPERVISORY STAFF

**Questionnaire For Supervisors of Yaa Asantewaa Girls SHS, Prempeh
College and Assemblies of God SHS.**

Introduction

The questionnaire is to gather information on the research topic assessing the relationship between instructional supervision and students' academic performance in senior high schools in Kwadaso Municipality. Your honest response will help in contributing to the success of this research work. You are assured that the information received will be strictly used for academic purpose and therefore will be treated confidentially. For this reason, your name is not required.

SECTION A: Background of Respondents

1. Gender: a. Male [] b. Female []
2. Age: a. 30 –35 years [] b. 36 –40 years [] c. 41 –50 years []
d. 51years & Above []
3. Educational Level:
a. First Degree (Non-Professional) [] b. First Degree (Professional)
[] c. Postgraduate (non-professional) []
f. Postgraduate (Professional) []
4. a. Position: Departmental Head [] b. Assistant Headmaster
Academics []
5. For how long have you held your supervisory position a. 1—5 years []
b. 6—10 year

c. 11—15 years [] d. 16—20 years [] e. above 20 years

6. Working experience: a. 1–5 years [] b. 6-10 years [] c. 11-15 years []
d. 16-20 years [] e. above 20 years []

SECTION B: Style of Instructional Supervision Practised

7. Please indicate by ticking your knowledge of the following instructional supervisory practices. Multiple Responses are accepted.

Clinical Supervision []

Collegial Supervision []

Developmental Supervision []

None []

Indicate the extent of your agreement or disagreement to the following statements about the type or style of instructional supervision being practised in the school. (Please, tick your position against each statement)

SA: Strongly Agree, A: Agree, D: Disagree, SD: Strongly Disagree

	Collaborative (Clinical) Supervision	SD	D	A	SA
8	I undertake weekly instructional supervisory planning for my department/school.				
9	I hold pre-observation conferences with my staff to clarify and agree upon the instructional actions and domains to be observed.				
10	I view my instructional supervisory practices as a collaboration between myself and my staff.				
11	I visit classrooms to observe and inspect teachers' instructional delivery weekly to ascertain areas where support				

	is needed.				
12	I hold post classroom instructional observation conferences with teachers at the end of every week to discuss observed instructional delivery practices that require improvement.				
	Collegial Supervision (Peer Supervision)	SD	D	A	SA
13	I perceive my teachers as colleagues in my instructional supervisory approach.				
14	I do weekly pre-observation conferences with teachers to plan together for the weeks' instructional delivery.				
15	I Permit the teaching staff under my supervision to engage in peer instructional supervision and share experiences as to how to improve on their instructional delivery.				
16	I task my colleagues under my supervision to compare their schemes of work and lesson plans for the term and share views on the improved ways of preparing them for the enhancement of instructional delivery.				
17	I engage my department to periodically do peer/group observation of one another's tutoring to assess themselves objectively for improved instructional delivery practices.				
	Developmental Instructional Supervision	SD	D	A	SA
18	My objective of supervising the teachers in my department is to help identify individual teachers' instructional needs and meet them accordingly.				

19	I operate different instructional supervisory methods for different teachers under my supervision.				
20	I develop and organize different instructional delivery training programmes for teachers based on their shortcomings in specific classroom experiences.				
21	I observe teachers' classroom teaching methodology and suggest other steps for the continuing improvement of instructional activities using varied strategies.				
22	I design and execute supervisory actions for the professional growth and development of teachers.				

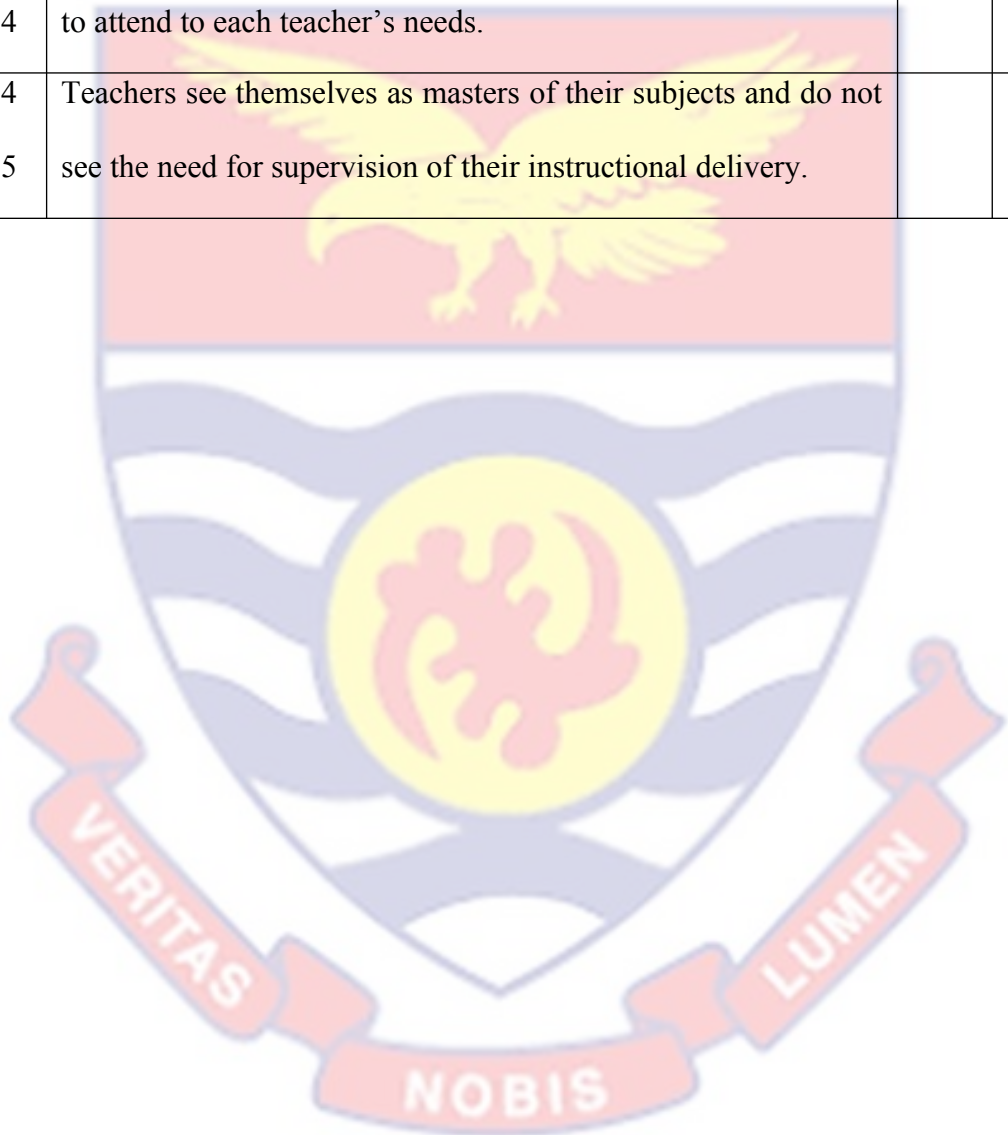
Section C: Challenges of Instructional supervision

Please, indicate by ticking your answers as to the challenges you encounter when implementing instructional supervision in your school. (Please, tick your position against each statement).

SA: Strongly Agree, A: Agree, D: Disagree, SD: Strongly Disagree,

	Statement	SD	D	A	SA
3 8	There is inadequate logistical support for the supervisors to effectively carry out their instructional supervisory duties				
3 9	Supervisors do have enough financial motivation to supervise teachers' classroom instructional delivery				
4 0	Supervisors are not trained periodically to be abreast of modern instructional supervisory techniques.				
4 1	There is absence of school policy regarding instructional supervision of teachers.				

4	Teachers view instructional supervision as a victimization				
2	strategy and therefore do not cooperate during supervision.				
4	Instructional supervisors are equally overburdened with				
3	teaching and/or administrative responsibilities.				
4	The supervised staff is so large that there is hardly enough time				
4	to attend to each teacher's needs.				
4	Teachers see themselves as masters of their subjects and do not				
5	see the need for supervision of their instructional delivery.				



APPENDIX B:

QUESTIONNAIRE FOR TEACHERS

Questionnaire for Teachers of Yaa Asantewaa Girls SHS, Prempeh

College and Assemblies of God SHS

Introduction

The questionnaire is to gather information on the research topic assessing the relationship between instructional supervision and students' academic performance in senior high schools in Kwadaso Municipality. Your honest response will help in contributing to the success of this research work. **You are assured that the information received will be strictly used for academic purpose and therefore will be treated confidentially.** For this reason, your name is not required.

SECTION A: Background of Respondents

1. Gender: a. Male b. Female
2. Age: a. 30 –35 years b. 36 –40 years c. 41 –50 years
d. 51years & Above
3. Educational Level:
 - a. First Degree (Non-Professional)
 - b. First Degree (Professional)
 - c. Postgraduate (non-professional)
 - f. Postgraduate (Professional)
4. Working experience: a. 1 –5 years b. 6-10 years c. 11-15 years
d. 16-20 years e. above 20 years

SECTION B: Style of Instructional Supervision Practised

5. Please indicate by ticking against the options if you have knowledge of the following instructional supervisory practices. Multiple Responses are

accepted.

Clinical/Collaborative Supervision []

Collegial Supervision []

Developmental Supervision []

None []

Indicate the extent of your agreement or disagreement to the following statements about the type or style of instructional supervision being practised in the school. (Please, tick your position against each statement)

SA: Strongly Agree, A: Agree, D: Disagree, SD: Strongly Disagree

	Collaborative (Clinical) Supervision	SD	D	A	SA
6	My superior involves me in the weekly instructional supervisory planning for my department/school.				
7	My supervisor and I hold pre-observation conferences to clarify and agree upon the instructional actions and domains to be observed.				
8	The instructional supervisory practices in my department is a collaboration between my supervisor and me.				
9	My supervisor visits classrooms to observe and inspect my instructional delivery weekly to ascertain areas where support is needed.				
10	My supervisor holds post classroom instructional observation conferences with teachers at the end of every week to discuss observed instructional delivery practices that require improvement.				

	Collegial Supervision (Peer Supervision)	SD	D	A	SA
11	My supervisor perceive me as a colleague in his/her instructional supervisory approach.				
12	My superior do weekly pre-observation conferences with me to jointly plan for the weeks' instructional delivery.				
13	My superior Permits the teaching staff under his/her supervision to engage in peer instructional supervision and share experiences as to how to improve on our instructional delivery.				
14	My superior tasks teachers under his/her supervision to compare our schemes of work and lesson plans for the semester and share views on the improved ways of preparing them for the enhancement of instructional delivery.				
15	My supervisor engages the teachers in our department to periodically do peer/group observation of one another's tutoring to assess ourselves objectively for improved instructional delivery practices.				
	Developmental Instructional Supervision	SD	D	A	SA
16	My supervisors' objective for supervising my classroom instructional delivery is to help identify my instructional needs and meet them accordingly.				
17	My supervisor uses distinct instructional supervisory methods for different teachers under his supervision.				

18	My supervisor develops and organizes different instructional delivery training programmes for teachers based on our individual shortcomings in specific classroom experiences.				
19	My supervisor observes my classroom teaching methodology and suggest other steps for the continuing improvement of instructional activities using varied strategies.				
20	My supervisor designs and executes instructional supervisory actions for my professional growth and development.				

