SCHOOL LEADERSHIP, HUMAN RESOURCE DEVELOPMENT INTERVENTIONS, LEARNING PROCESS, AND ACADEMIC PERFORMANCE OF PUBLIC SENIOR HIGH SCHOOLS IN GHANA

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A THESIS SUBMITTED TO THE SCHOOL OF MANAGEMENT AND LEADERSHIP IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY IN MANAGEMENT AND LEADERSHIP OF THE MANAGEMENT UNIVERSITY OF AFRICA

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DECLARATION

I declare that this thesis is my original work and has not previously in its entirety or part been presented for a degree or other academic award

Signature…  Date……30th September 2024

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DEDICATION

This work is dedicated to all Ph.D. Students at the Management University of Africa, especially Ghanaian Students.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACRONYMS AND ABBREVIATIONS

AL	-	Active Learning
CDSHSP	-	Community Day Senior High Schools Project
CL	-	Cooperative Learning
CO	-	Career Orientation
ESPR	-	Education Sector Performance Report
ESR	-	Education Sector Reform
FCUBE	-	Free and Compulsory Universal Basic Education
FSHS	-	Free Senior High School
GES	-	Ghana Education Service
HRD	-	Human Resource Development
HRDI	-	Human Resource Development Interventions
JHS	-	Junior High School
LE	-	Learning Environment
LO	-	Learning Opportunity
MoE	-	Ministry of Education
MUA	-	The Management University of Africa
NaSIA	-	National Schools Inspectorate Authority
NaCCA	-	National Council for Curriculum and Assessment
NTC	-	National Teaching Council
PSL	-	Positive School Leadership
PTA	-	Parent Teacher Association
SEIP	-	Secondary Education Improvement Project
SHS	-	Senior High School
SMC	-	School Management Committee/Board
SPPPs	-	School Performance Partnership Plans
SSSCE	-	Secondary School Certificate Examination
STEM	-	Science, Technology, Engineering, Mathematics Education
TVET	-	Technical and Vocational Education Training
WAEC	-	West Africa Examination Council
WASSCE	-	West Africa Senior School Certificate Examination

OPERATIONAL DEFINITION OF TERMS

Active Learning: refers to a method where students experience learning through investigations, collaboration, and the creation of ideas with materials in the class.

Career Orientation: means a teaching method that enables students to nurture career development competency to continuously explore and develop career paths in the classroom.

Cooperative Learning: means a teaching method where students learn cooperatively in small groups to provide support to one another on the learning content

Human Resources Development Interventions:

refers to interventions employed in enhancing the skills and knowledge of individuals, encouraging morale for learning, and producing performance.

Leadership: Any role or position within an organization that involves decision-making as well as influencing organizational direction and performance.

Learning Opportunity: means providing a variety of sources outside and inside the classroom for which students can gain professional development and experience.

Learning Process: refers to a student's experiences of acquiring new knowledge and skills that influence their attitudes, decisions, and actions.

School Management: means authorities appointed to a school with the responsibilities of planning, organizing, directing, and controlling administrative and management tasks focusing on the school and student outcomes.

School Leadership: refers to established institutions to ensure proper management control and decision-making about the school through the management team to attain educational goals.

ABSTRACT

The improvement in secondary education in Ghana has gained prominence through major reforms introduced by the Government after independence. However, major education reforms and interventions introduced to support the academic performance of second-cycle schools have not met the expected outcomes. The Ministry of Education, Ghana, reported a decline in academic performance among public Senior High Schools in 2019, with WASSCE pass rates in core subjects showing notable disparities across regions. Over the period from 2006 to 2021, only about 34% of students achieved passing grades in core subjects, with specific rates of 38% in Mathematics, 36% in English, 43% in Integrated Science, and 61% in Social Studies. This persistent underperformance has been attributed to school leadership and their capacity to effectively implement a vision for enhancing teachers' skills and knowledge. The study aimed to examine the effects of school leadership, human resource development interventions, and learning process on the academic performance of public senior high schools in Ghana. The first specific objective of the study was to examine the relationship between school leadership and academic performance. The second specific objective was to evaluate the moderating effect of human resource development interventions on the relationship between school leadership and academic performance. The third specific objective was to determine the mediating effect of the learning process on the relationship between school leadership and academic performance. The fourth specific objective was to examine the moderated-mediation effect of learning process and human resource development interventions on the relationship between school leadership and academic performance. Amongst other theories, the study anchored on distributed leadership and social learning theories. The study adopted the positivist and applied cross-sectional survey design. The study's target population was the 928 public senior high schools listed by the Ghana Education Service as of December 2023. This study applied the quantitative method and cluster-stratified random sampling to collect primary data from 2176 respondents. The data was codified and analyzed using Statistical Package for Social Sciences version 27. The reliability of the questionnaire was measured using Cronbach's alpha and the questionnaire was piloted before being administered. The quantitative data was analyzed using both descriptive and inferential statistics. The study revealed a positive and significant relationship between school leadership and academic performance. Additionally, in the mediating effect, learning process was found to have a partial mediating effect on this relationship, indicating that effective school leadership influences academic performance through its impact on the learning process. Also, human resource development interventions were found to have a significant moderating effect, enhancing the relationship between school leadership and academic performance. The study concluded that school leadership has a significant relationship on academic performance. The study recommends that stakeholders implement policies and practices that enhance learning processes and support human resource development interventions, leveraging these benefits to improve academic outcomes. The study found moderated-mediation of human resource development interventions and learning process on the relationship between school leadership and academic performance. The study recommends that school leadership should be prioritised in senior high schools in Ghana to facilitate the achievement of academic performance. The Ministry of Education and the Ghana Education Service must prioritize the appointment of competent leadership in senior high schools. Stakeholders in senior high education should provide support and resources to equip these leadership for their roles. Effective school leadership is essential for implementing interventions that promote teacher professional development and enhance the learning process, ultimately improving student academic performance.

CHAPTER ONE
INTRODUCTION

1.0 Introduction

This chapter provides an overview of the study, which investigates the relationships between school leadership, human resource development initiatives, the learning process, and academic performance in public senior high schools in Ghana. Specifically, this chapter aims to: provide context and background information on the study, define and explain the study variables, articulate the research problem and objectives, highlight the significance and importance of the study, define the scope and boundaries of the research, and identify the limitations and delimitations of the study. This chapter sets the stage for the investigation and provides a foundation for understanding the research that follows.

1.1 Background of the Study

This study examined the relationship between school leadership, learning process, human resource development interventions (HRDI), and academic performance in public senior high schools in Ghana. By investigating these factors, this research sought to contribute to the development of effective strategies for improving student academic performance and enhancing the overall quality of secondary education in Ghana. The study also aimed to provide valuable insights into the complex dynamics of secondary education, ultimately supporting the development of evidence-based interventions to enhance academic performance and student success.

One of the important goals of the United Nations Sustainable Development Goals (SDGs) is the provision of education for the populace. The objective of the goal is to ensure universal access and quality of education for all people. This is also to ensure the social and economic development of the country. A report by UNESCO in 2023 indicated that more than 763 million adults, mostly from Africa, still struggle with basic reading and writing abilities (UNESCO, 2023). The ultimate goal of establishing an academic institution is to promote teaching and learning. According to Narad and Abdullah (2016), every academic institution's success or failure is determined by the academic performance of its students. Some studies (Maponya, 2020; Ali et al., 2013; Singh et al., 2016) have found that the academic performance of students is crucial for the development of quality graduates who become outstanding leaders and the

nation's workforce, accountable for the socio-economic development of the country. Abonyi (2017) posited that many schools struggling across the globe, especially in the United Kingdom are found to be poorly managed. Although scholars have conducted several studies to assess students' academic performance, there are only a few studies conducted to assess school leadership, human resource development interventions, learning process, and academic performance. Most studies across the globe such as that conducted by (Amuzu et al., 2017; Farooq et al., 2011; Narad & Abdullah, 2016; Nweze & Okolie, 2014) focused on improving students' behaviour, attitudes, and desires in the learning process, and academic performance.

In England, Day et al. (2016), surveyed the impact of school leadership on student outcomes. The study found that sustained school effectiveness hinges less on the leadership style of principals and more on their ability to diagnose the school's needs accurately. Principals achieve this by applying communicated educational values through a series of layered, context-sensitive strategies that become progressively integrated into the school's culture, activities, and successes over time. School leadership has long been recognized as a crucial factor in shaping the academic outcomes of students (Antoci & Ceobanu, 2022). According to Antoci and Ceobanu (2022), effective school leaders are instrumental in cultivating a vision for learning, designing robust instructional and curricular programs, implementing comprehensive assessment systems, fostering communities of learning, and strategically allocating resources to support student success. Moreover, school leaders' ability to develop and empower their human resources, namely the teachers, is central to enhancing academic performance (Aquino et al., 2021). The effect of strong school leadership is greatest in schools facing the most difficult circumstances. The Wallace Foundation reported that school leadership was second only to classroom instruction in school-related impacts on student learning, accounting for about a quarter of total school effects on student achievements (Grissom et al., 2021).

According to recent research (Grissom et al., 2021), effective school leadership is widely recognized as a critical factor that significantly impacts student learning outcomes and academic achievement. Grissom et al. (2021) conducted a comprehensive study on the impact of school leadership on student outcomes. The overview of their findings suggests that effective school leadership is positively correlated with student achievement and learning growth, principals' leadership behaviours, such as setting goals and expectations, facilitating collaboration, and

providing support, are key predictors of student success, school leaders play a critical role in fostering a positive school climate, which in turn affects student motivation, engagement, and academic performance. The study highlights the importance of principal training and development programs that focus on building leadership skills to improve student outcomes. The study provides evidence that school leadership is a crucial factor in shaping student success and emphasizes the need for targeted investments in leadership development to enhance student learning and achievement.

In Portugal, an empirical study conducted by Rodrigues and Avila de Lima (2024) on school instructional leadership and student achievement reported that leadership on students' achievements were weak because they were not focused on student learning, but rather on school administration and management. Another study by Alsaleh (2021) on Kuwait's public secondary schools found that through school leadership all school leaders, teachers and students actively engaged in Professional Learning Communities (PLCs) characterized by shared values and vision, collective responsibility, reflective inquiry, collaboration, and support relationships. These PLCs significantly facilitated the transition to online teaching during the pandemic. The study found that school leaders, including principals and department heads, played a crucial role in fostering PLCs by providing training, supervision, instructional support, empowerment, and distributed leadership. However, the study also revealed persistent challenges related to inadequate educational resources, limited Internet access, and excessive workload during the pandemic. According to Netolicky (2020), internationally, educators have endeavoured to identify innovative solutions and leverage various educational technologies to support student learning. This has involved the adoption and implementation of diverse digital tools and platforms aimed at fostering continuous learning and student engagement.

Also, in New Zealand, Robinson and Gray (2019) conducted a study on the difference that school leadership made on student outcomes and found a positive impact of school leadership practices on student social and academic outcomes. The study discussed a set of leadership impacts on students' outcomes. The first was the separation of the leadership effects from other effects, such as the socio-economic backgrounds of students, the composition of the school and students' previous achievements. The second was the leaders indirectly influenced learning through the work of the teaching staff. The third effect was found in the time it took for the

effects of leadership decisions to be felt. For instance, a principal's initiative to establish teacher professional learning programs necessitated significant adjustments to the school's timetable, enabling teachers to schedule regular meetings and collaborative sessions. Once teachers engage in professional learning programs, they must translate their newfound knowledge into effective teaching practices that enhance student learning outcomes. Only when teachers successfully apply their learning to their teaching practices will the leader's initial decision have a tangible impact on student achievement (Robinson & Gray, 2019).

In Kenya, Gakenia et al. (2017) found that leadership capacity development and learning resource availability affected the influence of strategic leadership style on the academic performance of national schools. In another study in Kenya, Ozier (2018), found that school leadership is highly appreciated because of the major influence it has on students' academic performance. Another study conducted in Rwanda on developing education by (Uworwabayeho et al., 2020) found that the educational systems in many African countries are modelled on European standards which are recognized internationally. For South Africa, the results are similar to that of Rwanda. According to a study by Bush and Glover (2010), the racially segregated educational system in South Africa was replaced with a more unified education structure when the South African Schools Act (SASA) was enacted in 1996. The researchers found that the new structure placed more emphasis on school leadership improving students' achievements.

Efforts to improve the learning process and academic performance of senior high schools (SHS) began in Ghana, before the country gained independence in 1957 from British Colonialism (Akyeampong, 2010). The efficiency of the educational system in Ghana is a topical issue of discussion in academia, politics, social, and governance circles. According to Amakyi (2022), school leadership has a major role to play in the management of the school. This important role is to provide strategic direction of providing quality education to the school head and staff and hold the school management accountable for the school's performance. The study found that school leadership is directly responsible for the school's performance. There are enormous challenges with secondary education in Ghana. Education is not an end but a productive investment (Fielmua & Boye Bandie, 2012). The Government, through several policies, has initiated management research, monitoring, and evaluation to improve the enrollment, quality,

access, and performance of public Senior High Schools. Other programs introduced include the Special and Inclusive Education (SIE), the Pre-tertiary Education Management and the Free SHS policy.

For instance, a recent study by Duah et al. (2023) investigated the impact of the Free SHS policy on teaching, learning and academic performance. The findings showed that while the Free SHS policy led to a significant surge in enrollment, it also resulted in a concerning decline in student performance over time. The researchers identified several key factors contributing to this decline, including overcrowding in schools, insufficient teaching and learning materials, and high student-teacher ratios. These challenges, stemming from the policy's implementation, have ultimately affected the quality of education and student outcomes. The study highlights the need for addressing these issues to ensure that the Free SHS policy achieves its intended goals. These policies are aimed at promoting quality education and performance in Ghana. However, there are still challenges in the education sector of the country particularly in the rural communities (Adu-Agyem & Osei-Poku, 2012; Berry et al., 2018; Mohammed Gunu, 2018). Ghana is a predominantly rural, low-income country with a population of 32.1 million (Country Meters, 2021). A study conducted by (Mfum-Mensah, 2011; Manu et al., 2020) found that well-prepared interventions employed in education by school leaders enhance the skills and knowledge of students, encourage morale for learning and produce performance.

Another study in Ghana by Amedome (2018) yielded the following key findings: firstly, the dominant leadership style employed by the heads of the selected Senior High Schools (SHS) was democratic in nature. Secondly, an inverse relationship was discovered between school climate and school leadership style, suggesting that a positive school climate is associated with a more democratic leadership approach. The study, further, recommended that school leadership of SHS who had served in the same school for over a decade should be considered for transfer to a different school to bring in fresh perspectives and prevent stagnation. Also, the study recommended that school heads should engage in regular educational leadership courses to enhance their skills and stay updated on best practices and, they should adopt a more inclusive approach to decision-making, actively involving teachers and students in school administration to foster a positive school climate. The study finally recommended that teachers should undertake in-service training in educational leadership and capacity building to develop their

capacity for leadership roles and teaching skills. Tan (2018) is of the view that school leadership effects accounted for a greater proportion of between-school achievements between different categories of students.

1.1.1 School Leadership

Leadership can be seen as the process of controlling task activities within an organization (Balbuena et al., 2020). Belay et al. (2021) investigated the impact of leadership on organizational performance, examining the mediating roles of employee engagement and innovation. The study found that transformational leadership positively influences organizational performance, employee engagement and innovation fully mediated the relationship between transformational leadership and organizational performance, leadership style is crucial for enhancing employee engagement and encouraging innovation, ultimately driving organizational success. The study highlights the importance of effective leadership in fostering a work environment that promotes employee engagement, innovation, and overall organizational performance.

According to Bloom et al. (2015), school leadership is an autonomous body set up with the responsibility of managing and implementing decisions in schools. School leadership consists of all stakeholders who actively participate in co-pedagogical responsibilities in schools (Kyriakides et al., 2015). Day et al. (2020) indicated that in the United States and United Kingdom school boards are people, with high skills and experience, appointed by the government to perform oversight responsibilities and help the head of school to lead effectively. The study conducted by Day et al. (2020) highlighted three key leadership concepts: transformational, pedagogical/instructional, and distributed leadership in secondary schools. According to the researchers, while pedagogical/instructional leadership is crucial for academic outcomes, these concepts are not mutually exclusive. They suggested that effective leadership indirectly supported student outcomes by fostering a positive school culture, enhancing teaching and learning conditions, and promoting teacher motivation and well-being. The study findings revealed that successful student outcomes encompassed more than academic performance, including attendance, behaviour, engagement, and motivation. Context-sensitive and values-led leadership strategies, tailored to specific educational contexts, were more effective than isolated approaches according to the researchers. Also, they argued that school leaders, including

principals, and school groups, played vital roles in setting direction, promoting collaboration, and fostering a proactive school mindset to drive improvement and success in diverse school communities.

Young et al. (2017) also revealed that school leadership standards have had a positive impact on student outcomes. The study found that the growth and development in school leadership were important to preparing school leadership for the task of ensuring standards in schools to achieve student success. For this, Bush and Glover (2014) defined Leadership as an influential process that drives the attainment of the desired goals. They argued that effective leadership crafted a vision for their schools, rooted in their personal and professional values. The researchers further stated that school leadership communicated this vision persistently, inspiring their staff and stakeholders to embrace and work towards a shared purpose. The school's philosophy, infrastructure, and activities are all aligned to achieve this collective vision, fostering a cohesive and purpose-driven educational community. This explanation of Bush and Glover was supported by Robinson and Gray (2019). Robinson and Gray (2019) emphasize the importance of student-centred leadership in improving educational outcomes. The researchers highlight the need for a paradigm shift from a traditional, top-down leadership approach to a more collaborative, student-centred approach, the importance of teacher leadership and empowerment in improving student outcomes, the role of school leaders in creating a supportive learning environment and fostering a culture of collaboration and shared responsibility, the need for leaders to prioritize student voice, agency, and engagement in the learning process, and the importance of addressing systemic barriers and inequities to ensure equitable opportunities for all students. The study provides a framework for school leaders to adopt a student-centred approach, focusing on the interconnectedness of leadership, teaching, and learning.

In Ghana, school leadership in senior high schools are composed of the School Management Committee which serves as the governing body, headmaster and headteachers of the school that are collectively responsible for the long-term success of the senior high school, the delivery of sustainable value to the stakeholders and upholds the tenets of representative democracy (Amakyi, 2022). Studies have highlighted that school leadership differ from school management. For example, according to Kowalski (2012), school leadership is established to ensure proper management control and decision-making about the school through the

management team plays a crucial role in four key areas: (a) shaping the school's long-term vision; (b) formulating policies to foster a culture of excellence; (c) implementing systems for accountability in student learning outcomes; and (d) advocating for public education support. Their objective is to assist the school head and management in ensuring quality education for all students by defining the strategic direction of the school. Also, Amakyi (2022), found that school leadership establishes the school's purpose (vision and aims), culture of learning, and values and monitors their implementation through School Management.

According to Atasoy (2023), the main responsibilities of school leadership include headteachers and teachers' empowerment, building and developing potentials, creating a school learning environment, integrating leadership styles to improve the school, information technology and organization of the activities of other teachers, non-teaching staff, and the school. Also, Cunningham and Cordeiro (2012) found that school leadership is expected to empower others, specially build trust and confidence in the school community, highlight the school's vision and mission, and create enthusiasm and optimism for the school's improvement. Azure (2015) suggested that the focus of school leaders is to develop effective ways of helping students realize their full potential. This focus, according to Grimus and Ebner (2015) should be extra to the methods provided by the curriculum. Other researchers (Huaisheng et al., 2019; Manu et al., 2020) suggested that school leadership is focused on the superintendent of the institutions, mobilization, and operations to serve the government and other stakeholders' interests.

According to Ampah-Mensah (2024), in Ghana, the selection of school leaders is largely based on experience rather than formal preparation in school leadership. As a result, most school leaders rely on on-the-job learning (Abonyi, 2017), supplemented by informal and self-directed professional development. This approach has been necessitated by the historically uncoordinated and arbitrary nature of in-service training opportunities for school leaders (Ampah-Mensah, 2024). However, Ampah-Mensah (2024), argued that recent educational reforms in Ghana prioritize continuous professional development for both teachers and school leaders, formalizing the process through the National Teaching Council (NTC). The NTC is now responsible for accrediting continuous professional development providers, monitoring their activities, and awarding continuous professional development providers points to teachers,

promoting a more structured and recognized approach to professional growth and development in the education sector.

The Pre-Tertiary Education Act, 2020 (Act 1049) mandates the Ghana Education Service to establish in each senior high school a board of governors to be responsible for the school. According to the Kumasi Metropolitan Director of Education, every second-cycle institution is expected to have a governing board to assist the management of the school by providing advice to Headmasters and Headteachers (Daily Graphic, Pg.28, 11th October 2022). Researchers such as (Abdul-Rahaman et al., 2018; Kingful & Abena Nusenu, 2015) question the roles of leadership in secondary schools in the students' participation and engagement. According to Spillane (2006), leadership should be thought of in terms of collaborations and actions which can be distributed across different circumstances and individuals. In addition, he argues that school leaders must work together to improve academic performance. The study employs the view of Spillane (2006) on school leadership because he detaches from individualism and isolation and emphasizes collaboration and distribution among teachers to improve teaching practices. This idea of collaboration and distribution brought about the concept of distributed leadership espoused by (Spillane & Diamond, 2007), which is one of the main concepts underpinning this study. The academic performance of both students and teachers is dependent on school leadership. It also influences the experience and motivation of both teaching and non-teaching staff (Akyeampong et al., 2015). The study evaluates school leadership by measuring the school leadership's potential in creating a clear and inspiring vision, school leadership's interferences, and school leadership's school improvement strategies.

1.1.2 Human Resource Development Interventions (HRDI)

According to Armstrong and Taylor (2023), Human Resource Development (HRD) is a framework for helping individuals develop their skills, knowledge, and abilities for personal benefit. According to the researchers, HRD aims to enhance individual and organizational performance, improve productivity, and drive business results. Effective HRD practices foster a learning culture, support continuous improvement, and align with organizational goals and strategies. Gilley et al. (2002), defined HRD as the method of improving organizational performance, competence, competitiveness, and renewal through formal and informal interventions, programs, and management decisions. They posited that HRD is a dynamic and

evolving practice used to enhance organizational effectiveness. This definition recognizes the impact of human resource development on performance. It is an effective way of helping individuals realize their full potential. Even though students should take a considerable degree of responsibility in managing their learning, they need the help and support of their instructors and school leaders. Swanson (2022) defines human resource development as a process of developing and unleashing human expertise, knowledge, and potential to improve performance, achieve goals, and sustain the organizations' competition. The definition emphasizes the importance of human resource development in enhancing individual and organizational capabilities, driving performance improvement, and fostering adaptability in a rapidly changing environment. Swanson (2022) highlights human resource development as a strategic and integrated approach to developing human capital, which will, in turn, affect the role that decision-making plays in the outcomes.

According to Abonyi & Ahwireng (2020), when education leaders participate in HRD interventions the expectation is that they will acquire new knowledge, skills, and attitudes to develop the school. This affirms the research position that enhancing individual performance is the purpose of HRD and hence unless learning is transferred back to the workplace, it is of little value to the institution (Stone et al., 2020). Public SHS could be made viable in the current economic development if human resource development intervention (HRDI) is made a priority in the school (Abonyi & Ahwireng, 2020). School Leadership must support HRDI that prioritizes the change of individual attitudes, beliefs, problem-solving strategies, and interpersonal skills that are best used in improving individual work methods and performance. Such professional development and learning interventions are designed and implemented by Government agencies for school leadership and other staff of senior high schools. Part three of the Education Regulatory Bodies Act, 2020 (Act 1023) establishes the National Teaching Council (NTC) mandated to regulate the teaching profession in Ghana´s senior high schools. As a development agenda, the Council among others conducts examinations for the licensing of persons who complete teacher education programmes, develops and promotes continuing professional education in the teaching profession, and provides a framework for the development of the teacher education curriculum. These structured activities are aimed at developing the head and teachers to affect the school's performance.

According to a study by Tingle et al. (2019), the majority of school leadership preparation programs are delivered through academic programs at Higher Education Institutions (HEIs). Nevertheless, the efficacy of these programs in producing effective school leaders has been a subject of debate, with some arguing that they may not adequately prepare leaders for the complexities and challenges of school administration. This critique has sparked a discussion on the need for more practical, experiential, and context-specific approaches to school leadership development. Alternatively, Ampah-Mensah (2024) suggested that school leadership development programs exhibit diverse structures, encompassing both centralized and decentralized approaches, with varying durations, spanning from brief training workshops to extensive, long-term programs. A common expectation underlies these initiatives: that the knowledge and skills acquired through school leadership training will be successfully transferred and implemented in the respective school contexts, yielding practical applications and positive impacts on educational leadership practices.

According to Abonyi et al. (2020), structured human resource development interventions (such as professional training programs, headteacher support, peer support, and opportunities for knowledge acquisition) were crucial to the success of teachers in the classroom. Their study's findings revealed that headteachers' support, manifested through the provision of essential teaching and learning resources, peer support fostered by a culture of shared norms, beliefs, and values, and opportunities for knowledge sharing during school-based in-service training (INSET), contributed significantly to the successful transfer of teacher learning. Additionally, students' enthusiasm and commitment to learning, as well as the availability of necessary teaching materials, supported the transfer of teacher learning to the classroom. However, constraints such as inflexible school timetables, heavy teacher workloads, and inadequate resources hindered the effective application of professional development learning. The study concludes that educational policymakers and training practitioners must prioritize the development of infrastructures that empower headteachers to provide teachers with the necessary resources and support, thereby facilitating the effective transfer of learning and enhancing teacher professional development.

The Government, through various agencies, provide regulated in-service training programmes to strengthen school leadership capacity to provide effective supervision in schools in Ghana.

Other international organisations such as the Institute of Educational Planning, Tanzania in collaboration with the Institute for Educational Planning and Administration (IEPA), Ghana and the Faculty of Education at the University of Bath instituted the DfID-funded project that provides professional development support for school leadership to successfully implement quality education in Ghana (Abonyi, 2017). This study examines the moderating effect of Human Resource Development Interventions (HRDI) on the relationship between school leadership and academic performance. Specifically, it investigates how HRDI, comprising technical training, instructional supervision, professional development support, and coaching, influences the learning process and subsequently enhances academic achievement. By exploring the moderating role of HRDI on the school leadership-academic performance link, this research aims to provide insights into the effectiveness of HRDI in strengthening the impact of school leadership on student outcomes.

1.1.3 Learning Process

According to Cheng et al. (2019), the learning process is the process individuals undertake towards the acquisition of new knowledge and skills and ultimately impacts their thoughts, behaviours, and choices. A study conducted by (Anwar, 2015) suggested that the learning process is the provision of direct experience to learners to develop the competencies that enable them to explore and understand what goes on around them. He stated that the learning process value plays a key role in changing the attitudes of individuals and it has three processes. According to Anwar, (2015), the process value includes (1) willingness, (2) identification, and (3) internalization. The willingness of the individual to learn by obtaining a reaction or positive responses from other individuals. The identification is where individuals imitate the behaviour or attitude of another individual following what the individual may regard as a form of relationship that may exist among them (teachers and others such as friends and students at school). Internalization is where the individual receives the influence and becomes willing to follow the effect because there exists some form of trustworthiness between them. This study employs the definition given by Anwar (2015) because it encapsulates the process, the usage, and the impact of the learning process on learners.

The learning process is important in schools because it requires a systematic format, which includes establishing learning needs, defining learning objectives, deciding on the contents,

deciding on the methods of delivery, deciding on the location and facilities required, the budget, deciding on who delivers the training and deciding on how evaluation of the learning is done (Aheto-Tsegah, 2011; Ansong & Alhassan, 2016; Daniels, 2016). In addition, Schenke et al. (2017) believe that the learning process is important at the student level since it provides learning opportunities, fosters an environment of learning, promotes active and paired learning, and strengthens career orientation channels. An important function of School Leadership is to promote a quality learning process by ensuring teachers develop lesson plans, lesson contents, feedback, and facilitation that promotes learning. Studies (Alexander, 2017; de Janasz & Crossman, 2018; Runhaar et al., 2019) found that learning processes such as active learning, learning opportunities, career orientation, and cooperative learning seek to enhance the skills and knowledge of students, and also encourage morale for learning and understanding. De Janasz and Crossman (2018) posited that the learning process comprises the acquisition, processing, and application of knowledge and skills. It encompasses the drive to learn, interpret information, encode and store information, maintain knowledge over time, use knowledge and skills in real-world situations, receiving and act on feedback. According to the researchers, effective learning involves a cycle of preparation, action, and reflection, with a focus on continuous improvement and development. This process is influenced by individual factors, such as prior experiences and learning styles, as well as environmental factors, like social support and technology.

This research examines the role of school leadership in fostering a conducive learning environment that optimizes academic achievement, examining how effective leadership strategies and practices can create a supportive and inclusive learning process that enhances student learning outcomes and promotes academic success.

1.1.4 Academic Performance

Previous studies have concluded on evaluation of test results as the main determinant factor that measures academic performance. A study conducted by Tus (2019), stated that academic performance refers to using grade points to measure the level of knowledge learners demonstrate in courses. Another study by Alhassan et al. (2020), mentioned that Academic performance refers to students' output, which is usually represented in the form of grades. The study (Amponsah et al., 2018) also suggested the achievement of targets and objectives set for

learners, which is demonstrated through grades, as the definition of academic performance. The present study adopts the definition given by (Amponsah et al., 2018) to explain academic performance as the achievements in standardized tests or examinations undertaken by a student. This is because the present study accepts the assertion that academic performance is determined by grades obtained in examinations at the end of the term, semester, or program of study, and therefore, higher grades indicate better performance. The present study was focused on how school leadership could introduce interventions to improve academic performance.

According to Mutuku et al. (2021), academic performance is the measurement of a student's ability to achieve the required performance assessment criteria. In their study, the researchers argued that though grades are used, academic performance was regarded as the observable and measurable behaviour in the assessment situation. Better academic performance ensured the students' progression on the academic ladder and was also used to determine the student's career path. Bunce et al. (2017) also discussed grade goals as indicators of academic performance. Their study revealed that a higher-grade goal was associated with a higher level of academic performance. They also argued that good grades were a type of performance that was related to the student demonstrating competence in comparison with colleagues. According to Mandasari (2020), academic performance refers to the assessment of student accomplishments across a range of academic subjects. Typically, educators and school administrators gauge these achievements through evaluations of classroom participation, graduation rates, and outcomes of standardized assessments

Student academic performance can be assessed through multiple indicators such as grade point average (GPA) of end-of-semester examinations or mock examinations, secondary school graduation rates, yearly standardized tests, and university entrance examinations. A study by Brew et al. (2021) states that academic performance is significant in schools because it enables school leaders to evaluate students' mastery of the subject content and award grades. It also depicts students' progression on the educational levels. In Ghana, the education policy has maintained academic performance as the main determining factor of SHS students' progression to higher education institutions in Ghana (MoE, 2016). Academic performance is measured in this study using the percentage average test scores obtained by students in the mock examinations of core English, core Mathematics, core Integrated Science, and core Social

Studies. The mock examinations are conducted by school leadership as the final preparation examinations towards the West African Senior School Certificate Examinations (WASSCE).

1.1.5 Public Senior High Schools in Ghana

In Ghana, the secondary education system plays a crucial role in providing students with a comprehensive and structured introduction to knowledge, including technical skills, aiming to equip them with the necessary expertise to excel as high-level professionals and future university graduates, thereby fostering a highly skilled and competent workforce. The Education Act, 2008 (Act 778) and the Education (Amendment) Act, 2010 (Act 802) are the recent parliamentary legislations which provide for the establishment of a second-cycle level of education system to provide pre-tertiary education in areas such as science, business, arts, vocational, technical, agriculture, among others. Initially, the SHS system was introduced in 2007 in Ghana not to change the curriculum but to expand the system of secondary education from three to four years. The policy of four-year SHS education was reversed after three years of implementation by Act 802. The management of national procedures and curricula about second-cycle institutions falls under the authority of the Ghana Education Service (GES). The Education Regulatory Bodies Act, 2020 (Act 1023) established the National Schools Inspectorate Authority (NaSIA) to regulate, inspect, and license pre-tertiary schools; the National Council for Curriculum and Assessment (NaCCA) to develop and implement curriculum; and the National Teaching Council (NTC) to license teachers and regulate the teaching profession.

The GES is made up of the personnel of the GES, teachers and non-teaching personnel of schools, managers of educational units and their supporting staff, and persons holding posts created as GES posts. According to the GES Report 2023, there are 928 public senior high schools located in the 16 regions of Ghana. The schools are categorized into three groups (i.e., Categories A, B, and C) to ensure effective management. Category “A” schools are the grade 1 high-performing schools; Category “B” schools are the grade 2 performing schools, and Category “C” schools are the low-performing schools. The GES ensures that schools are assigned a Board of Governors, the required GES-registered headteachers, teachers, and supporting non-teaching staff. The official language of instruction in schools is English. There are four mandatory (core) subjects for students in Public SHS (i.e., Core Mathematics, Core

English, Core Integrated Science, and Core Social Studies). Also, students are expected to select from elective subjects available in one of these departments: Arts, Vocational, Business, Science, Agriculture, or Technical. Students take 30 credit hours of classroom teaching per week. As part of the completion of the SHS, all students take the final examinations, titled the West African Senior School Certificate Examination (WASSCE), in seven or eight subjects.

The WASSCE commenced in 2006 in Ghana to replace the Secondary School Certificate Examination (SSSCE) which had been the final examination for secondary school leavers in Ghana until 2005. Grading in WASSCE is categorized into: credit passes of "A1", "B2", "B3", "C4", "C5", and "C6"; pass-no credit of "D7" and "E8"; and failing grades of "F9". The minimum grade required for entry into post-secondary education or tertiary institution is a "C6" average with credits (A1-C6) in all subjects. Students must pass core subjects for progression into the tertiary level in Ghana. The Government, through agencies and school leaders, supervises students learning and the implementation of interventions to improve students' academic performance (Awiah, 2018). School Leadership is established in schools to focus on promoting a concept of ongoing enhancement in students' academic performance, which involves organizing strategies to assist school management in achieving this concept (Amakyi, 2022).

1.2 Statement of the Problem

In Ghana, there have been several reforms introduced to improve students' academic performance. Major reforms have been focused on management, teacher education, new standards, and curriculum to improve quality and academic performance (Brew et al., 2021). Despite the importance, reforms have been ineffective in implementation, and public schools still lack the preferred academic performance. The Ministry of Education sector performance, 2019, reported in Ghana, a decline in public SHSs´ academic performance (Ministry of Education [MoE], 2022). Incidentally, from 2006 to 2021, WASSCE pass rates in core subjects show significant changes between the mandatory four core subjects (i.e., English Language, Core Mathematics, Integrated Science, and Social Studies). Performance from the WASSCE has been poor for core subjects. The results are divergent substantially in all regions. This resulted in the proportion of students qualifying for Tertiary education (i.e., obtaining a pass of C6) decreasing substantially within the period. It is observed that the proportion of students with

passes in core subjects (i.e., Mathematics, English, Science, and Social Studies) was a little over 34% within the period. The proportion of students obtaining A1-C6 in mathematics reached 38%, English language 36%, Integrated Science 43% and Social Studies 61% (MoE, 2022). A study by Abreh et al. (2018) on trends in the performance of WASSCE in Ghana, found that the results did not postulate a definitive pattern. The study concluded that the inability of teachers to complete the syllabus, insufficient contact hours for teaching, inadequate qualified or trained teachers, and poor teaching approaches of the teachers resulted in the trend of irregular performance in secondary education in Ghana. Research such as (Owan et al., 2018) attributed the unproductive performance of teachers were as a result of ineffective school leadership, who have the responsibility of ensuring effective teaching and learning in schools.

Despite the below-average performance of public SHS in Ghana, past studies have shown mixed findings on their causes. Past studies have argued for some possible causes to be conceptual, contextual, and methodological differences. Conceptual causes arise where authors conceptualize variables differently based on indicators and constructs in their studies as opposed to their theoretical underpinnings. For example, Abonyi (2017) investigated the role of the school leadership in overseeing the administration of SHS in Ghana and found a positive relationship between board members' functions and school improvement. However, he did not measure school leadership in terms of creating a clear and inspiring vision, school leadership's interferences, and school leadership's school improvement strategies as used in this study. In another study, Atteh et al. (2020) measured school leadership differently by investigating the perception and perceived skills of headteachers and teachers in the integration of teaching and learning in SHS and Junior High School (JHS). The study used different indicators not grounded in theory and focused on one subject. These studies present conceptual gaps which the current study addresses by creating a clear and inspiring vision, school leadership's interferences, and school leadership's school improvement strategies which are theory and empirical studies supported indicators of school leadership. Atteh et al. (2020) posited that school leadership has the responsibility of ensuring effective teaching and learning to improve academic performance.

Contextual differences are another source of variance in results and findings among studies. By definition, a contextual difference will manifest where studies are done in different physical locations such as continents, regions, and countries. They happen when populations of the

studies are different even if locations are the same. For example, a study conducted in Pakistan on factors affecting secondary school academic performance focused on only socio-economic status and parents' level of education (Farooq et al., 2011). Another study conducted to investigate factors affecting students' academic performance in Dar-es-salaam, Tanzania, adopted the qualitative research design and found that many learners could not master subjects, were not familiar with the terminologies applied in many subjects, and had weak capacities in English (Maganga, 2016). Also, Jayanthi et al. (2014) suggested that in assessing student´s performance academically, an investigation that embraces more than one school should be conducted. Since these studies were done outside Ghana, these present contextual gaps which may be a source of differences in the findings. The present study addresses these gaps since it focuses on SHS in Ghana. Another study conducted by Manu et al. (2020) focused on how Ghana´s public senior high school leadership is efficient in terms of human resource management and finance. According to this study, the school leadership was lacking with regards to the supervision and management of finance, but efficient in managing human resources. Apart from the study conducted in only one region of Ghana, the researchers recommended that a further study be conducted to investigate the school board's role in functional training.

Methodological differences manifest where similar studies apply different methods such as design, sampling, and data analysis. For example, an investigation by Huaisheng et al. (2019) on how school administration impacts academic performance: An Issue for Ghanaian Public Senior High Schools found it positive. They adopted the descriptive research design. In another study, Adu-Gyamfi et al. (2016) investigated how school leadership improve academic performance in the implementation of education reforms in Ghana. The study found a positive relationship however the study was a qualitative study and the researchers used online methods to collect data. Online methods have been found to have fairly low response rates which could have affected the results and findings of that study. This present study employs a cross-sectional study design where data is collected within a short period hence eliminating possible cross-time variations. Also, the study employs the face-to-face method of data collection which has been known to be more accurate.

The study sought to answer questions about the focus of the school leadership in improving academic performance through better learning process and supporting appropriate HRDI by investigating the relationship between school leadership, learning process, HRDI and academic performance of public SHS in Ghana.

1.3 Objectives of the Study

This section outlines the overall goals and specific aims of the study, which are:

1.3.1 General Objective

The main aim of the study was to ascertain the relationship between school leadership, human resource development interventions, the learning process, and the academic performance of public senior high schools in Ghana.

1.3.2 The Specific Objectives

The study aimed to achieve the following specific objectives:

i. To examine the relationship between school leadership and academic performance of public senior high schools in Ghana.
ii. To evaluate the moderating effect of human resource development interventions on the relationship between school leadership and academic performance of public senior high schools in Ghana.
iii. To determine the mediating effect of the learning process on the relationship between school leadership and academic performance of public senior high schools in Ghana.
iv. To examine the moderated-mediation effect of human resource development interventions and learning process on the relationship between school leadership and academic performance of public senior high schools in Ghana.

1.4 Justification of the Study

The study is justified since it contributes towards theory development, policy development and improvement of practice in senior high schools. Theoretically, issues relating to the interaction between school leadership, HRDI, the learning process, and the academic performance of public SHS in Ghana have not been fully addressed by academic research on the country's educational leadership. This has left important issues regarding the precise underlying causes of students'

poor performance unsatisfactorily unanswered. Although some studies have examined the relationship between school leadership and academic achievement in Ghanaian schools, its generalizability makes more research on a case-by-case basis necessary (Asafu-Adjaye, 2012; Fusheini et al., 2017; Mohammed Gunu, 2018). The findings of this study add to the body of current academic literature and theory by offering more pertinent information on HRDI, school leadership, the learning process, and the academic performance of public SHS in Ghana. The study positively contributes to the body of knowledge. This study develops new knowledge about HRDI that leads to academic performance, through sustained and progressive school leadership. The study adopts existing theories and develops hypotheses that establish the cause-effect relationships between the dependent and independent variables under study.

The study also contributes to policy development and reforms in senior high school education in Ghana. The new knowledge developed through this research will be associated with the stakeholders' effectiveness in implementing educational reforms and performance improvement for public SHS. This will greatly benefit the Ministry of Education (MoE), which develops policies, the GES which implements policies, and other education regulatory bodies such as the NaSIA, NTC, and NaCCA. For instance, the study promotes the development agenda of the NTC in ensuring that teachers build their capacities and to the standards of the profession. This research impacts the nation on policies that address the socio-economic costs of low performance of public SHS. This research provides essential leverage to education stakeholders, including Government, Politicians, Heads of Schools, Teachers, Parents, as well as education planners to rethink policy and reforms. The educational cost consists of the overall number of students who could not pass the WASSCE core subjects and are unable to secure progression to tertiary institutions.

Practically, this research is useful feedback for the SHS curriculum and school regulatory bodies to review the mode of managing and teaching in the schools. There are a significant amount of benefits of education for both individual and national development in developing countries of which Ghana is one (Mohammed Gunu, 2018). This research develops practical insights for creating, adjusting, and improving the methods employed by school leadership in the Ghanaian context. The poor performance of public SHS in WASSCE is a contributory factor to the public perceptions that completing SHS does not guarantee functional literacy. HRD theories such as

the social learning theory (Wenger, 2018) and goal-setting theory (Latham, 2012), identify positive effects of education on the employability of individuals and functional literacy. The study provides feedback on how school leadership introduces learning process and promotes human resource development interventions that are necessary for developing students' learning behaviours, attitudes, and desires and to improve their academic performance. The study is also relevant to postulating feedback on the state of SHS teaching and learning facilities in the country. This feedback may to an extent guide the regulatory bodies and the Ministry of Education in their quest to improve resource allocations to SHS in the various districts and regions. The study provides a more sophisticated method to be adopted by the leadership of all secondary schools whose focus is on providing quality education by improving teaching and learning, both within their institutions and in collaboration with colleagues in other schools.

1.5 Scope of the Study

This research investigates the interplay between school leadership, learning process, human resource development interventions, and academic achievement, examining how these factors intersect and impact student outcomes and school performance. This research is focused on all the 928 public senior high schools in the 16 regions of Ghana. The study included 2176 respondents selected from the sample size of 272 schools from all regions of Ghana. The respondents comprised of school leadership categorised into school management committee chairperson, headmaster/headmistress, assistant headmasters/headmistresses (i.e., in charge of Academics and Administration duties), and heads of departments of the core subjects. The study adopts four main theories, which are the distributed leadership theory, social learning theory, reinforcement theory and goal-setting theory. The study was confined to the time frame of July 2021 to September 2024, in line with Ghana's SHS curricula and academic calendar. The researcher enlisted the support of five research assistants to address the issues related to accessibility, thus the research could thoroughly review the variables under study and cover all the respondents in the wide study coverage.

1.6 Limitations of the Study

The study was also limited to four variables, thus: school leadership, learning process, human resource development interventions and academic performance. The study was confined to public senior high schools in Ghana which may limit the generalizability of findings to the

broader context of secondary education in Ghana. Only 272 out of 928 public senior high schools in Ghana were included, which may not fully represent the entire population. Additionally, since the WASSCE examinations are also administered in countries like Nigeria, Liberia, Sierra Leone, and The Gambia, this focus on Ghana restricts the study's scope.

The study was limited to all the 16 regions of Ghana. The geographical coverage of Ghana is wide and the researcher would face challenges of covering the scope within the time frame of the research. Further, the disruptions of the academic calendar due to the COVID-19 pandemic influenced the study's schedule and data collection. The potential for low engagement from respondents, particularly regarding new concepts like human resource development interventions also challenged the study.

1.7 Delimitations of the Study

The study specifically examines the moderating and mediating impacts of HRDI and learning on the relationship between school leadership and academic performance in public senior high schools in Ghana. The study selected the quantitative research approach to accommodate the large sample size. A cross-sectional design survey and cluster-stratified random sampling technique were employed to ensure adequate representation for data collection. Primary data collection was confined to one academic year to manage the challenges associated with frequent calendar changes.

The study is anchored in distributed leadership theory and social learning theory, guiding the assessment of relationships among variables. The assessment of the moderating impact of HRDI on the correlation between school leadership and academic performance involves gauging technical training, instructional supervision, professional training support, and coaching. Likewise, the mediating impact of learning on the connection between school leadership and academic performance is assessed through learning opportunities, active learning, career orientations, and cooperative learning.

1.8 Chapter Summary

This study investigates the relationship between school leadership, learning processes, human resource development interventions, and academic performance in public Senior High Schools

in Ghana. The chapter introduces the background, the research problem, the context, and study significance. It also presents the research objectives and scope. The chapter highlights the importance of effective school leadership, learning processes, and human resource development interventions in improving academic performance. The study's theoretical framework, conceptual framework, and operational definitions are also introduced. Finally, the chapter outlines the delimitations of the study and introduces the study variables.

CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

This chapter is organized into two main sections: theoretical review and empirical review. The theoretical review examines key theories related to leadership, learning, and motivation, providing a conceptual framework for the study. The empirical review, on the other hand, synthesizes existing research on the study's objectives, including the relationships between school leadership, learning processes, human resource development interventions (HRDI), and academic performance. Additionally, it examines the moderating and mediating effects of learning processes and HRDI on the relationship between school leadership and academic performance, providing insights into the complex interactions between these variables.

2.1 Theoretical Literature Review

This research is grounded in the understanding that academic performance is influenced by school leadership. A substantial body of literature exists on school leadership, human resource development interventions (HRDI), the learning process, and academic performance in public senior high schools in Ghana. This section reviews the theoretical frameworks that underpin the study. Specifically, the research is anchored on the Distributed Leadership Theory and Social Learning Theory, which enable the examination of how HRDI and the learning process influence the relationship between school leadership and academic performance. The section also discusses other theories guiding the study such as the Reinforcement Theory and the Goal-Setting Theory. These theories provide a foundation for understanding the complex dynamics between school leadership, HRDI, learning processes, and academic performance.

2.1.1 Distributed Leadership Theory

According to Harris et al. (2022), the concept of distributed leadership, also known as shared leadership, dates back as far as 1250 BC but has gained recent acceptance, and scholars have yet to reach a consensus on it. They argued that the concept of distributed leadership was propounded by Spillane et al. (2001). Building on the groundbreaking work of Spillane et al. (2001), the concept of distributed leadership, which encompasses both formal and informal leadership roles, has garnered significant interest from researchers, policymakers, practitioners, and educational reformers worldwide. This idea of shared or 'stretched' leadership has sparked

a substantial body of empirical research, with numerous international studies investigating its dynamics and impact. Distributed leadership has emerged as a prominent area of inquiry, attracting widespread attention and scrutiny from the global academic community (Harris & Jones, 2020). Researchers (Goksoy, 2015; Gronn, 2008) credited (Gibb, 1954) as the first author to explicitly refer to the concept, stating that (Gibb, 1954) proposed that "Leadership is best conceived as a group quality, as a set of functions which must be carried by the group." According to Spillane and Diamond (2007), distributed leadership is an approach that conceptually and analytically elucidates how leadership functions among individuals within an institution. They argue that the distributed leadership theory comprises two aspects: the leader-plus aspect, which recognizes and considers the contributions of all individuals involved in leadership within the institution, and the practice aspect, which emphasizes the practice of leading and managing frames as a product of the interactions among school leaders, followers, and aspects of their situation. The authors contend that these aspects of distributed leadership concurrently provide an analytical framework for examining the day-to-day practice of leadership in the institution.

According to Khmaladze and Mesiridze (2024), distributed leadership in education involves sharing leadership responsibilities beyond just the principal, engaging all staff members to foster greater opportunities for change and improvement. In a democratic society, this approach to school leadership is essential. Tan (2018) found that distributed leadership affected the academic achievements of students among various categorical levels of education. Bolden (2011) and Hall (2013) suggested that research on distributed leadership theory has predominantly focused on the field of school education and is of particular interest to schools. However, they only concentrated on schools in the United States and the United Kingdom. The present study focuses on school leadership and academic performance in senior high schools in Ghana. According to Dampson et al. (2018), two principles underpin the concept of distributed leadership. The first is a shared process to which several individuals contribute, and the second is, that different individuals come together to form a network to intersperse essential expertise, and this interaction develops into leadership. The researchers argue that a major significance of distributed leadership theory is that it provides a vocabulary and the tools to be used in examining leadership in schools.

According to Jones et al. (2017), distributed leadership for learning and teaching represents a collaborative leadership paradigm where individuals, united by mutual trust and respect for each other's expertise, work together to achieve shared goals and objectives. This approach thrives in an open and inclusive cultural context, both within and across institutions, where diverse perspectives and contributions are valued and fostered. By harnessing the collective expertise and energies of stakeholders, distributed leadership promotes a shared sense of ownership and responsibility, ultimately enhancing the quality of learning and teaching outcomes. Goksoy (2015) argues that the distributed leadership approach takes a holistic view, encompassing leadership, team dynamics, group processes, and organizational characteristics. Unlike traditional leadership models, which assume that a single individual must lead to instigate change, distributed leadership emphasizes the collective capacity of teams and organizations. According to Goksoy, this approach fosters change and goal achievement through shared leadership, collaboration, and distributed expertise. By acknowledging the interconnectedness of leadership, teams, and organizational factors, distributed leadership promotes a more inclusive and collaborative leadership model.

Carbone et al. (2017) employed a 'Distributed Leadership Benchmarking Tool' to evaluate the effectiveness of distributed leadership in five Australian institutions that were participating in a collaborative teaching quality development initiative. This initiative aimed to foster teaching and learning excellence by bringing together diverse teams comprising academics, coordinators, and other stakeholders. The benchmarking tool enabled the assessment of the institutions' capacity to facilitate distributed leadership, involving the shared responsibility and collective action of various stakeholders. By applying this tool, the researchers examined the extent to which the institutions had established a distributed leadership culture, empowering teams to work collaboratively and drive improvement in teaching and learning outcomes. The researchers found two main issues: firstly, a high degree of alignment between the teaching quality development initiative and the distributed leadership benchmarks, indicating a strong consistency between the initiative's design and the principles of distributed leadership; and secondly, the effectiveness of the benchmarking tool in assessing the extent to which teaching and learning quality initiatives aligned with distributed leadership benchmarks, providing a useful framework for evaluating the distributed leadership capacity of similar initiatives.

The distributed leadership theory applies to the study because it provides a background that pivots to improving teaching and learning. Previous studies have found distributed leadership to have an impact on students' academic performance. A study by Jambo and Hongbe (2020) on the effect of Principal's distributed leadership practice on students' academic achievement revealed that distributed leadership had positive and indirect effects on academic performance. The study concluded there was a need for further investigation into the principal's distributed leadership practices since there was a lack of patterns accepted universally. Another study by Davis (2009) on distributed leadership and school performance found a statistically significant relationship between distributed leadership and school performance in the area of mathematics education. The study also revealed that there existed a significant relationship between distributed leadership and reading performance and teacher leadership dimensions. The study only focused on mathematics education. The present study is focused on mathematics, english, science and social studies. The present study is focused on the concept of distributed leadership, to explain the impact of school leadership on the student learning process and academic performance.

Drawing on the concept of the distributed leadership theory can implement change in secondary education. Jambo and Hongde (2020) argued that the distributed leadership approach shifts the focus away from a single positional leader, the principal, and instead emphasizes the collaborative efforts of both leaders and followers in achieving common goals and solving problems. While the principal remains a crucial element in the success of this leadership practice, they are no longer the sole focal point. Effective implementation of distributed leadership in schools' hinges on the principal's ability to strategically delegate tasks, identify and engage relevant stakeholders, and develop and utilize essential artefacts to facilitate collaboration and decision-making. By adopting this approach, schools can foster a more inclusive and shared leadership culture, promoting collective responsibility and enhancing organizational outcomes.

A study by Ho and Ng (2017) offers three insights into distributed leadership. Firstly, it highlights how boundary-spanning responsibilities create tensions in leadership distribution. Secondly, it explores how these tensions create opportunities for leaders to exert influence, often leading to innovative problem-solving. Thirdly, it emphasizes the dynamic nature of distributed

leadership, where leadership roles shift across various levels as leaders interact within intersecting activity systems. In the context of distributed leadership, the focus is on analyzing leadership activities and the interactions among multiple leaders engaged in leadership practices within a particular social and cultural setting (Hartley, 2023). According to Shava and Tlou (2018), the concept of distributed leadership has gained significant traction in the field of education, advancing both theoretical understanding and practical application. Distributed leadership is widely embraced in educational leadership, seen as a collaborative social process that emerges through interactions among various participants. Distributed leadership has witnessed rapid adoption as a strategy in managing schools, especially within decentralized education systems.

2.1.2 Social Learning Theory

According to Wenger (2018), Albert Bandura (1977) is identified as the key founder of the social learning theory in 1977, who proposed that a person's self-awareness and judgment about their ability to learn significantly influence learning under this theory (Wenger, 2018; Yermack, 2017; Grusec, 2016). Khan et al (2024) argued that Bandura's seminal Social Learning Theory posits that individuals acquire new behaviours through observational learning, where they witness and imitate the actions of others. The social learning theory posits that behaviours reinforced by rewards are more likely to be repeated (Wenger, 2018). Self-efficacy, identified by Cook et al. (2016) as a determinant of motivation to learn, is crucial, as high self-efficacy leads students to strive for learning even in less favourable conditions (Akers & Jennings, 2015). Researchers (Ahn et al., 2020; Helm, 2017; Bandura & Hall, 2018; McLeod, 2011) outlined four learning processes suggested by the social learning theory: attention, retention, motor reproduction, and motivational processes. The attention phase highlights the importance of individuals becoming aware of the significant role of a performing model in learning through observation (Cohen, 2014). The basis for the retention phase is that the learner should be able to remember the skills and behaviours being observed. The retention phase involves encoding observed behaviours and skills for easier recollection (Daniel, 2016), achieved through visualization or verbalization (Schunk, 2012). During the motor reproduction phase, the learner experiments with the behaviour he or she observed to determine whether the outcome is like the support received by the model.

Further, Rumjaun and Narod (2020) argued that Social Learning Theory posits that observing, modelling, and imitating the behaviours, attitudes, and emotional responses of others is a crucial mechanism for learning and adopting new behaviours. Deaton (2015) stated that the theory highlights the significance of observational learning, where individuals learn by witnessing the behaviours and consequences of others, and subsequently model and imitate these behaviours, incorporating them into their repertoire. Bandura's theory emphasizes the role of social observation, cognitive processing, and agency in shaping behaviour, attitudes, and emotional responses. Albert Bandura's Social Learning Theory (1977) builds upon the foundational principles of behaviourist learning theories, including classical conditioning and operant conditioning (Koutroubas & Galanakis, 2022). However, Bandura's theory diverges from these predecessors by introducing two critical components: (1) mediating processes, which intervene between stimuli and responses, and (2) observational learning, whereby behaviour is acquired through observing and imitating others in the environment. By incorporating these innovations, Bandura's Social Learning Theory provided a more comprehensive understanding of the learning process, highlighting the complex cognitive and environmental factors that shape behaviour (Koutroubas & Galanakis, 2022).

According to Bandura and Hall (2018), the learner's ability to reproduce the behaviour is dependent on his or her ability to recollect the behaviour observed. The learner must be able to physically exhibit the behaviour. To be able to adopt a modelled behaviour, the learner must be allowed to practice and receive the necessary response to effect the needed changes to be like the model (Burde et al., 2017). According to Bandura (2019), through the social learning theory, behaviour that is strengthened will be recurring in the future. Helm (2017) stated that collaborative learning is distinguished by complex patterns of interpersonal relationships and dynamics among learners. However, conventional assessment approaches typically rely on rating scale data, overlooking the intricate relational aspects that define collaborative learning. By neglecting these relational characteristics, traditional assessments may provide an incomplete understanding of collaborative learning processes, highlighting the need for a more nuanced and relationship-focused evaluation approach.

Armstrong and Taylor (2020) suggested that learning is most impactful in a social context, where individuals actively engage in real-world situations and participate in communities of

practice, project teams, and networks. Through collaborative experiences and shared activities, individuals construct their understanding and develop new knowledge, skills, and perspectives. According to the authors, this social learning approach fosters a dynamic and interactive environment, where individuals learn from each other, share expertise, and build collective knowledge (Armstrong & Taylor, 2020). The study centres on the social learning theory, which emphasizes that individuals learn by observing people they perceive to have expertise and credibility (Akers & Sellers, 2011; Schunk, 2012; Wenger, 2018). The social learning theory is pertinent to this research as it demonstrates that both positive and negative behaviours can be taught or adopted through observation. This theory underscores the significance of observational learning, wherein individuals absorb knowledge, skills, attitudes, and beliefs by observing others' behaviours and the subsequent consequences. This process ultimately leads to the modelling and adoption of observed behaviours, highlighting the crucial role of social observation and imitation in shaping human behaviour. Bandura's theory challenges traditional behaviourist views, emphasizing the cognitive and agentic aspects of learning and behaviour acquisition. Consequently, it serves as an intervention tool to influence positive behaviour among students by altering the reinforcement associated with the origin of the problem.

Social Learning Theory, as described by Rotter (2021), examines how individuals learn by observing others in social settings. It suggests that people acquire new behaviours and attitudes through imitation, influenced by reinforcements and consequences. Rotter emphasizes that learning occurs not only through direct experience but also through vicarious learning, where observing others' actions and their outcomes shapes one's behaviour. At the core of this theory lies reciprocal determinism, which underscores the dynamic interaction between personal traits, environmental factors, and behaviour. In essence, Social Learning Theory highlights the role of social interactions and observational learning in molding human behaviour and fostering development. Further, Zimmerman (2013) emphasizes the significance of social learning theory in understanding academic performance, highlighting the interplay between personal factors, environmental influences, and behavioural outcomes. The revelations in Zimmerman (2013) underlines the present study.

Eyyam et al. (2016) found social learning theory has an indirect impact on students' academic success by emphasizing the significance of studying behaviours, such as observing and imitating

others' study habits, learning strategies, and academic behaviours. By fostering a supportive learning environment and encouraging students to adopt effective learning practices, social learning theory indirectly influences academic achievement. In other words, social learning theory shapes students' academic success by promoting a culture of learning, where students learn from one another and develop essential skills and strategies that contribute to their academic success. This was supported by Harinie et al. (2017). Matthews et al. (2011) revealed that the creation of social learning spaces can significantly enhance student engagement by promoting active learning, social interaction, and a sense of belonging. These spaces facilitate collaborative learning, peer-to-peer support, and a shared sense of community, leading to increased student motivation, participation, and academic achievement. By fostering a supportive and inclusive environment, social learning spaces encourage students to engage actively with their peers and learning materials, promoting a deeper understanding and appreciation of the learning process.

2.1.3 The Reinforcement Theory

According to Gordon and Krishanan (2014), reinforcement theory delineates the mechanisms through which individuals learn behaviour and appropriate actions. This theoretical framework posits that an individual's behaviour is contingent upon its consequences and is rooted in the work of B. F. Skinner (1974). As Skinner (1974) found in (Gordon & Krishanan, 2014) elucidates, the theory asserts that changes in behaviour occur in response to events or stimuli and the subsequent consequences, whether in the form of rewards or punishments. Positive reinforcement, characterized by pleasurable outcomes resulting from behaviour, is a key element of operant conditioning, conditioning individuals to repeat desired behaviours through feedback and knowledge of results. Skinner identifies four approaches to reinforcement: positive reinforcement, negative reinforcement, extinction, and punishment.

According to Susanto et al. (2021), positive reinforcement involves reinforcing behaviour through pleasurable outcomes, while negative reinforcement entails the removal of an unpleasant outcome. Extinction, on the other hand, involves the withdrawal of positive or negative reinforcers to eliminate a behaviour, and punishment entails the imposition of an unpleasant outcome following a behaviour, leading to a decrease in that behaviour. The theory, commonly applied in workplace contexts through mechanisms such as promotions and wage

increases, is also pertinent to educational settings. In the academic realm, it is employed to engage students through activities like tests, motivating them to apply their best efforts (Redmond, 2010). Armstrong and Taylor (2020) stated that reinforcement theory serves as the foundation for training programs focused on skill development through instruction. These programs utilize a conditioning approach, where learners are encouraged to respond to stimuli and receive immediate feedback. Progress is achieved through incremental steps, each deliberately designed to lead to a positive outcome, reinforcing desired behaviours and fostering skill mastery.

The reinforcement theory finds applicability in this present study by emphasizing the importance of aligning learning outcomes with the acquisition of knowledge, skills, or behavioural changes in students. Schieltz et al. (2020) found that students' problem behaviour may be as closely tied to their academic abilities as it is to the rewards and reinforcement they receive for their academic achievements. In other words, behavioural issues may stem not only from skill deficits but also from the motivational and reinforcement systems in place. This suggests that addressing problem behaviour requires a comprehensive approach that considers both academic skill-building and the reinforcement structures that shape students' behaviour and motivation. The reinforcement theory underscores the role of school leadership in motivating students, cautioning against indiscriminate distribution of rewards. Furthermore, reinforcement theory underscores the critical role of educators in guiding students by providing corrective feedback on their behaviours and outlining the pathways to positive reinforcement.

In addition, Zahid and Cheema (2023) investigated the effects of reinforcement on student learning outcomes, revealing both positive and negative impacts. Their study showed that both students and teachers agree on the benefits of reinforcement theory in enhancing learning. However, they also found that negative reinforcement can have harmful consequences on learning and student well-being, suggesting that it should be eliminated from teaching practices. The study highlights the importance of using positive reinforcement strategies to promote effective learning and support student well-being. The study emphasizes the importance of educators understanding student psychology and behavior to effectively implement reinforcement strategies. Additionally, ongoing teacher professional development programs are crucial to ensure positive student achievements and a supportive learning environment. The

study reveals that when teacher training in reinforcement strategies is prioritized, both positive and negative reinforcement are observed across all educational levels, highlighting the need for intentional and informed use of reinforcement techniques to promote student success. By investing in teacher training and understanding student psychology, educators can harness the power of reinforcement to create a positive and effective learning environment.

While reinforcement theory has shown promise in improving student learning and achievements (Susanto et al., 2021; Gordon & Krishanan, 2014), further research is necessary to fully explore its effectiveness and optimal applications. More studies are needed to investigate the various aspects of reinforcement theory, including its impact on different age groups, learning styles, and subject areas, as well as its long-term effects on student motivation and academic success. By continuing to investigate the potential of reinforcement theory, educators and researchers can uncover new insights and strategies to enhance student learning and achievement.

2.1.4 Goal-Setting Theory

According to Burns et al. (2021), the goal-setting theory is an employee-engagement strategy that aims at mapping out measurable and precise goals to increase output. Goal-setting theory can be attributed to the article written in 1968 by Edwin Locke, titled "*Toward a Theory of Task Motivation and Incentive".* This theory is underpinned by the assumption that goals and intentions are cognitive and volitional, and they cause people to behave the way they do (Landers et al., 2017). According to Landers et al. (2017), the theory postulated that students' learning is better facilitated with the provisions of learning objectives that are challenging and specific. Studies have shown that visions that are challenging and specific yield positive outcomes as compared to ones that are unchallenging and vague (Locke & Latham, 2013; Lunenburg, 2011). According to Miller (2020), Locke's goal-setting theory outlines five principles of effective goal-setting. They include clarity, which implies the goal must be specific and clear to avoid misunderstanding; challenges, which imply the need for goals to be stimulating to keep employees on their toes; a commitment, which indicates the need for employees to understand and support the goal assigned to them from the beginning; feedback, which explains the need for regular response to ensure tasks are on track throughout the goal-achieving process; and tasks complexity, which expresses the need for goals to be broken down

into smaller goals to ensure step-by-step progress towards the main goal (Locke & Latham, 2015).

The goal-setting theory applies to this study because it can be applied when creating a curriculum for students where goals are set for them to accomplish to increase their performance. Studies have shown that setting goals has a significant influence on students' learning performance. Tan (2018) found that goal-setting theory had effects on school leadership styles and academic achievements of students among various categorical levels of education. The impact of goal-setting theory can be noticed when developing a lesson plan for training. The lesson plan starts with specific objectives and provides information on the actions the learner is expected to demonstrate in the learning situations and the acceptable level of performance. Further, Sides and Cuevas (2020) suggested that the incorporation of goal setting into daily instructional practices may be a valuable strategy for teachers, as it has the potential to positively impact student outcomes. Sides and Cuevas (2020) found that integrating goal setting into daily teaching practices can be an effective strategy for enhancing student outcomes. Their study explored the impact of goal setting on motivation, self-efficacy, and math achievement in elementary students. The experimental group set goals for multiplication fact fluency, while the control group did not. The results showed that the experimental group outperformed the control group in math achievement, but goal setting had no significant effect on motivation or self-efficacy. This study supports the goal-setting theory in academic contexts, suggesting that teachers may benefit from incorporating goal-setting into their instructional practices to improve student performance.

In addition, Mayse (2016) emphasized the versatility and effectiveness of goal-setting theory in driving behavioural change across various contexts and populations. The researcher highlighted the crucial role of goal-setting in academic settings to optimize student outcomes. By harnessing the power of goal-setting, teachers can foster student motivation, self-efficacy, and academic achievement. Setting specific, challenging, and attainable goals is key to unlocking higher levels of academic success and boosting student motivation. Goal-setting cultivates a growth mindset, empowering students to embrace challenges as opportunities for growth and learning. By implementing effective goal-setting strategies, educators can promote improved academic performance, increased graduation rates, and enhanced career prospects. Hematian et al. (2017)

suggest that goal setting should be integrated into educational practices to foster self-directed learning and boost student achievement. They emphasize that setting goals has a profound impact on task performance, leading to enhanced motivation and productivity. By setting specific and challenging goals, combined with regular feedback, individuals can significantly improve their performance. The goal-setting theory has far-reaching applications across various domains, including teaching, research, and beyond. By harnessing the power of goal setting, educators and practitioners can unlock individuals' potential, leading to remarkable gains in motivation and performance.

Although studies have demonstrated the potential of goal setting in enhancing student outcomes, additional research is necessary to comprehensively understand its impact on students' affective traits, including motivation, self-efficacy, and emotional well-being. By delving deeper into this relationship, educators can uncover effective strategies to leverage goal setting, promoting both academic success and personal growth, and fostering a more supportive and inclusive learning environment.

2.2 Empirical Review

This segment conducts an empirical literature review through a systematic analysis of prior studies pertinent to the research objectives. The extant research indicates a discernible correlation between school leadership and academic performance. The discussion specifically delves into previous research encompassing school leadership, academic performance, the learning process, and HRDI. It is based on empirical evidence, thus, relying on data observations from previous studies rather than on theoretical perspectives or personal opinions. The discussions are provided under the objectives of the study.

2.2.1 School Leadership and Academic Performance

Extensive research over nearly four decades has investigated the critical role of school leadership in driving school improvement. This body of work has examined various leadership roles, focusing primarily on school principals while also considering assistant principals, teachers, and other school staff members. Past studies, (Asafu-Adjaye, 2012; Atteh et al., 2020; Ranson, 2011; Wilkinson & Long, 2019) concentrated on how school leadership effectively manage second-cycle education. Özdemir et al. (2022) conducted a systematic review of

research concerning the relationship between school leadership and academic performance and found that there exists a relationship, and the most widely used model in school leadership was instructional leadership. A study by Inkoom (2012), highlighted that the Ministry of Education through GES sets the school leadership in second-cycle to be responsible for the school.

According to Wilkinson and Long (2019), the role of school leadership is to foster equal access to quality education at the secondary level which prepares youth for several opportunities at the tertiary level and the job market. They argue that school leadership continues to make efforts to increase the access, quality, and gender differences of schools. In another study by Huguet (2017) on how effective school leadership can impact school performance, he found a positive relationship and concluded that school leaders should be trustworthy managers and educators who show passion for pedagogical teaching and learning. A study by Ranson (2011) on the role of school boards in school improvement contends that school boards are instituted to furnish strategic direction, conduct scrutiny, and enhance the operational framework of the school to elevate academic performance. A study conducted by Atteh et al. (2020) on the positive correlation between the perceived competencies of school leadership and outcomes in the realm of teaching and learning was discerned in the study. The researchers argue that school leaders need additional knowledge and skills based on a consideration of the interactions among technology, content, and pedagogy. The researchers employed a descriptive cross-sectional survey research design along with a questionnaire as the data collection instrument. They also adopted cluster sampling and simple random techniques as the sampling method. Their findings confirmed that, using ICT in teaching and learning mathematics enhances performance, indicating positive perception among teachers, and that SHS students have a positive attitude towards the perception that ICT should be incorporated in the teaching and learning of mathematics. Their work, however, was limited to a single subject, which makes its application to other disciplines difficult.

A study conducted by Tan (2018) examined the school leadership effects on student academic achievements and found school leadership effects accounted for a greater proportion of between-school achievements between different categories of students. Studies by Ananga (2011) and Asafu-Adjaye (2012), compared the relationship between school performance and school leadership. Asafu-Adjaye (2012) posited that the control and management of secondary

education for improved performance in Ghana can be considered into two main categories linked together, that is, school management committee/Board and principal management, and systems management. He argues that the school management committee/Board and principal management of SHS are vested in the GES (Awiah, 2018). In a study by Akyeampong et al., (2015), which intimated the study of Asafu-Adjaye (2012), he argues that the performance of school leadership created by the Government has not been as expected, due to inadequate funding, staff shortfalls, weak enforcement powers, and the lack of a clear accountability framework leading to the poor academic performance of students. He highlighted the Education Performance Report (2012), stating that the control, administration and management of each school was a direct responsibility of the school leadership and, therefore, the school leadership was accountable for the school's performance. His work did not state the factors that could affect school leadership for the needed results. According to Cruickshank (2017), school leadership has a positive relationship with student outcomes. He concluded that school improvement could take several years to become evident.

A study by Huaisheng et al. (2019) to examine how school leadership affects the academic performance of Public SHS students in Ghana found a positive relationship. The researchers found that the school management functions apart from democratic management should be intensified in various public SHS to enhance students' academic performance. Their study adopted a descriptive research design and employed variables such as students' and teachers' input, PTA support, and monitoring and evaluation. The study adopted the use of a questionnaire to collect data. In other studies, (Hallinger & Heck, 2010; Harris, 2011; Inkoom, 2012; Salifu, 2014), stated that there were increasing concerns that School Leadership focus and Teachers' learning styles are contributory factors to the ineffective learning habits of students and poor performance. According to Salifu (2014), school leadership who are well-placed have failed in driving substantive widespread improvement in the performance of the school.

A study by Kitur et al. (2020) examined the relationship between school leadership styles and academic performance in secondary schools in Kenya and found a strong significant relationship. The researchers suggested that principals' idealized leadership influence should be promoted as it improved academic performance. Another study by Ochieng (2023) found a positive significant impact of principal's management practices on academic performance in

public secondary schools in Kenya. Brown and Owusu's (2014) investigation on school leadership and school performance illuminated challenges within school leadership. The study focused on Ghana's Senior High School (SHS) education, revealing pervasive leadership issues across educational institutions. Teacher dissatisfaction with school leadership manifested in demonstrations. The research, conducted in the Sunyani Metropolis, involved 100 SHS teachers and 10 headmasters, selected through simple random sampling. Findings indicated strained relationships between teachers and headmasters, coupled with limited teacher involvement in decision-making. However, generalizing these findings beyond the Sunyani Municipality is cautioned.

In another study, Luschei et al. (2021), who examined school governance and student academic achievements, found that an increase in teacher decision-making was consistent with academic performance. Their study suggested that where school leadership styles are controlled, there is no fundamental change in decision-making and student academic achievements. The study postulated that the impact of teachers teaching in the classroom, which impacts students' achievements, was independent of school leadership. The study was also based on the students' achievements in mathematics, reading and science subjects. Owan et al. (2018) investigated the association between school management and secondary school students' academic performance in Nigeria and found a positive relationship. The study revealed that, among others, there existed disciplinary control, classroom management, and teacher motivations caused the relationship between school management and academic performance to be high. Kapur (2018) investigated the factors influencing students' academic performance in secondary schools in India and found school leadership and parental factors to be among them.

Another insight into the relationship between leadership and student academic performance is provided by Day et al. (2016), who surveyed the impact of leadership on student outcomes. The study's main focus was on how school leaders use transformational and instructional strategies to improve students' academic achievements. The study adopted the mixed method and investigated the relationship between the functions of school principals and improvement in primary and secondary school's academic performance. The study offers fresh empirical insights into how effective principals achieve and maintain long-term improvements in schools. According to the study, this is accomplished through a blend of transformational and

instructional leadership strategies. The research underscores that sustained school effectiveness hinges less on the leadership style of principals and more on their ability to diagnose the school's needs accurately. Principals achieve this by applying communicated educational values through a series of layered, context-sensitive strategies that become progressively integrated into the school's culture, activities, and successes over time.

Another study by Amedome (2018) yielded the following key findings: firstly, the dominant leadership style employed by the heads of the selected Senior High Schools (SHS) was democratic in nature. Secondly, an inverse relationship was discovered between school climate and school leadership style, suggesting that a positive school climate is associated with a more democratic leadership approach. The study, further, recommended that school leadership of SHS who had served in the same school for over a decade should be considered for transfer to a different school to bring in fresh perspectives and prevent stagnation. Also, the study recommended that school heads should engage in regular educational leadership courses to enhance their skills and stay updated on best practices and, they should adopt a more inclusive approach to decision-making, actively involving teachers and students in school administration to foster a positive school climate. The study finally recommended that teachers should undertake in-service training in educational leadership and capacity building to develop their capacity for leadership roles and teaching skills. The study was focused only on school leadership and academic performance, it did not examine moderating or mediating variables.

A study by Tan et al. (2024) on how school leadership practices impact student outcomes found school leadership practices to be significantly related to students' academic achievement. The research offers insights into how the leadership practices of leaders at various levels correlate with student learning. It emphasizes that school leaders primarily influence student learning indirectly by creating conducive conditions that support classroom teaching. Sebastian et al. (2017) found that both principal and teacher leadership impact student outcomes and school improvement. Their study focused on the learning climate as the sole factor connecting principal and teacher leadership with student achievement, it did not explore other moderating variables. According to Leithwood et al. (2020), research consistently demonstrates that leadership exerts the second most significant influence, after teaching itself, on student learning at both school and classroom levels. There is substantial evidence indicating that effective school leadership

significantly impacts students' learning outcomes. Leithwood et al. (2020) examined the mediating roles but did not examine the moderating roles focusing only on the principal's leadership.

Trimmer et al. (2021) studied the relationship between school leadership and Aboriginal student outcomes and found a positive relationship. The study posited that effective collaboration and engagement between school leaders play a crucial role in achieving collective decision-making and fostering enduring change in school outcomes. Their review explores the roles of both school and community leadership in improving Aboriginal student learning and social outcomes over the long term. Additionally, it assesses the influences of school policies, governance, and decision-making processes on these outcomes. The study was focused only on school and community leadership and student comes, it did not examine moderating or mediating variables on the relationship. Trimmer and Dixon (2023) highlight a significant gap in the literature concerning the impact of school leadership on the academic outcomes of Aboriginal students. Askell-Williams and Koh (2020) focused on the initiatives that sustained schools for school improvement and student outcomes. They found out that school leadership and teacher inputs served as the main sustainable tools for student outcomes and school improvement. The research philosophy and design are not properly articulated in their study. The research also focused on the introduction of new programmes as the role of school leadership and teachers and did not examine other roles.

In a historical exploration, Adu-Gyamfi et al. (2016) analyzed the impact of Ghana's educational policies on Senior Secondary School Education and leadership. Emphasizing the evolving nature of educational reforms, they highlighted Dr Kwame Nkrumah's attempt to integrate African studies into the British education system. Adopting a qualitative approach and relying on secondary sources, their work illuminated the historical context of educational reforms in Ghana. Limitations included the qualitative nature and reliance on secondary data. Subsequently, the introduction of the Free Senior High School (FSHS) policy in 2017, offering various cost-free provisions to students, prompted considerations of the role of school leadership. Asumadu (2019) emphasized the need for equipping school leadership with skills and resources to enhance student performance due to increased access to SHS. School boards were identified as pivotal in three functions: establishing a clear vision and culture, allocating

tasks, and implementing financial management practices for enhanced financial stewardship (Asumadu, 2019). Heystek and Emekako (2020), who conducted a study on leadership and motivation for improved academic performance in schools, concluded that elements such as extra classes, teaching collaboration, monitoring and team building were adopted by school leadership to improve academic performance. The study did not focus on any mediating and moderating variables.

A study conducted by Rodrigues et al. (2024) found that most of the principals' leadership practices on students' academic achievements were weak. The study discussed possible reasons for the findings. However, the study adopted the mixed-method approach and also involved students as respondents. The present study was focused on school leadership using the quantitative approach. Robinson and Gray (2019) conducted a study on the difference that school leadership made on student outcomes in New Zealand and found an impact of five sets of school leadership practices on student social and academic outcomes. However, the study did not evaluate any intervening variables and also adopted the observation and behavioural interview technique in the research. The present study utilized learning process and human resource development interventions as mediating and moderating variables respectfully to evaluate the influence of school leadership on academic performance.

The preceding discussions highlighted the necessity of further examining the relationship between school leadership and academic performance aiming to better comprehend this relationship in Ghanaian schools.

2.2.2 School Leadership, Human Resource Development Interventions and Academic Performance

According to Aybas et al. (2017), a moderating variable alters the nature of the relationship between predictor variables and an outcome variable, either amplifying, diminishing, or transforming the impact of the predictor variable on the outcome. In other words, a moderating variable changes the strength (i.e., makes it stronger or weaker) of the relationship, changes the direction (positive or negative) of the relationship and also influences how the predictor variable affects the outcome. Dawson (2014) defined moderation as the process by which a third variable (moderator) influences the relationship between two other variables (predictor and outcome).

Research such as (Aybas et al., 2017; Mutuku et al., 2021; Agbodeka et al., 2019) suggested that the moderator can strengthen, weaken, or change the direction of the relationship between the predictor and outcome variables. Mutuka et al. (2021) highlighted that researchers should carefully select and justify moderators based on theoretical and empirical grounds.

The examination of the nexus between school leadership and academic performance has been a subject of previous investigations (Awiah, 2018; Asumadu, 2019; Fusheini et al., 2017; Manu et al., 2020; Brew et al., 2021; Narad & Abdullah, 2016; Nweze & Okolie, 2014). However, the outcomes of these studies have yielded inconclusive results, indicating the potential existence of other variables that may play diverse roles in shaping the relationship between school leadership and academic performance. Abonyi's (2017) research, for instance, identified human resource development interventions as plausible moderating variables in the efforts of school leadership to enhance academic performance in Senior High Schools (SHS). Abonyi argued that the engagement of school leadership in Human Resource Development Interventions (HRDI) is anticipated to yield the acquisition of new knowledge, skills, and attitudes necessary for fostering students' improved academic performance. This assertion aligns with the research perspective emphasizing that the primary aim of human resource development is to enhance individual performance, underscoring that unless the acquired knowledge is effectively transferred back to the workplace, its value to the institution remains limited (Stone et al., 2020).

Contrary to prior studies (Manu et al., 2020; Narad & Abdullah, 2016; Nweze & Okolie, 2014), which predominantly concentrated on enhancing the behaviour, attitudes, and aspirations of school leadership for the betterment of student's academic performance, Abonyi's findings shed light on the potential moderating role of HRDI in this complex relationship. This underscores the need for a comprehensive understanding of additional variables that may influence the dynamics between school leadership and academic performance. Grissom et al. (2021) conducted a comprehensive study on the impact of school leadership on student outcomes. The overview of their findings suggests that effective school leadership is positively correlated with student achievement and learning growth, principals' leadership behaviours, such as setting goals and expectations, facilitating collaboration, and providing support, are key predictors of student success, school leaders play a critical role in fostering a positive school climate, which in turn affects student motivation, engagement, and academic performance. The study highlights

the importance of principal training and development programs that focus on building leadership skills to improve student outcomes. The study provides evidence that school leadership is a crucial factor in shaping student success and emphasizes the need for targeted investments in leadership development to enhance student learning and achievement.

A study by Mutuku et al. (2021) on the moderating effect of school infrastructure on the relationship between human resource management practices and the academic performance of secondary schools in Kenya, among others, found that human resource management practices such as training and development moderated the influence of proper decision-making in the secondary school and the student's academic performance. The study used a mixed methods design. The study concluded that when school leaders address the different infrastructural priority areas, then the effectiveness of the human resource capacities will influence student's academic performance. The study further recommended the implementation of policies that would ensure better decision-making and human resource management practices for the achievement of academic performance. Bryson et al. (2023) also found that better recruitment strategies and training have an intense influence on the management of schools and academic performance.

Faizuddin (2018) conducted a study in Malaysia on the influence of human resource management practices on head teachers of public and private schools and the attainment of institutional and educational goals and found a significant effect. The study evaluated approaches such as a conducive work environment, training and development, dedication to work, and proper placement of teachers. The study concluded that proper support and professional training of head teachers and teachers affected the teaching methods and attainment of student's academic performance. The study recommends that head teachers, who play supervisory roles on other teachers, should ensure better human resources improvement strategies to result in better performance of the schools. These studies bring to the fore that human resource management and human resource development have a bearing on school leadership functions and the performance of schools. Ankoma-Sey and Maina (2016) conducted a study on the role of effective supervision on the academic performance of senior high schools in Ghana and found a positive weak relationship between the headteacher's function and

academic performance. The study indicated that the findings were the results of neglect of supervision functions.

A study by Bush and Glover (2021) on the impact of human resource development on school leadership and student achievement found a positive impact. The study concluded that human resource development interventions focusing on leadership development, teacher training, and capacity building positively impacted the relationship between school leadership and academic performance. Another study by Sultana (2018) evaluating human resource development practices in schools found that human resource development practices that emphasized teacher professional development, leadership capacity building, and organisational learning have a significant effect on student outcomes and school effectiveness. The arguments of Sultana (2018) are supported by Ukozor (2024), who also highlighted that human resource development interventions have a positive impact on school leadership effectiveness and student academic performance.

Pourrajab et al. (2016) conducted a study on the relationship between principal leadership styles and students' academic achievement and postulated four-frame leadership models. The study was conducted on school principals in Malaysia. The study found that a positive, direct and slight correlation between principals' leadership styles and student academic achievements moderated by the four-frame techniques. The study identified human resource development as part of the four-frame techniques and concluded that human resource development impacted the relationship between principals' leadership styles and students' academic achievement. Hervie and Winful (2018) found that training and development moderated the relationship between teacher performance and students' academic achievements. Their study was a case study based on one selected senior high school in Ghana. Therefore, the findings in (Hervie & Winful, 2018) cannot be generalized. A study by Coe et al. (2014), indicated that a systematic and integrated approach to student learning and academic performance with a focus on the development of teachers is central to the success of any school. Human resource development interventions are planned activities to help individuals develop their skills, knowledge, and abilities for personal benefit and the organizations that they work in (Armstrong, 2014). It is an effective way of helping individuals realize their full potential.

According to Awiah (2018), the system of training implemented in schools should facilitate periodic review and/or revision of the mission statement and as a result, improve performance. A study by Hallinger and Heck, (2010) postulated that until there is a collaborative effort by the Government in professional development and school leadership become beneficiaries, contributors, and partakers, school improvement may stall. Government agencies such as NTC and NaSIA develop and implement capacity development and training for school leadership and teaching professionals. According to research by the UK Department of Education and Skills, (Grimus & Ebner, 2015) a systematic focus on teaching and learning, leadership, and collaboration with other organisations is key to the improvement of SHS. The HRDIs are introduced by the Government through various agencies and school leadership is expected to support the HRDI activities. For example, aspects of HRDI like technical training, supervision of instruction, support for professional training and coaching have been found to improve the ability of a school's human resources to work better to cause improved performance (Abonyi, 2017).

The first HRDI intervention is technical training. Technical training involves formal education and training of school human resources to transform teaching and learning to improve education outcomes. A study by Agbodeka et al. (2019), calls for technical training for school leadership to involve themselves in the guidance of students to enhance capacity and create an efficient career guidance process for academic performance. Their research indicated that where leaders of schools are given required skills training and development about their profession, their impact directly affects student performance. The study also posited that students can make good career choices when given the right counsel by their teachers. This position is supported by Upoalkpajor (2020), who argued that the inability of School leadership to counsel students has led students to perform poorly in schools and also make bad decisions when it comes to career choices. A study by Donkoh (2015), suggested that some school leadership appointed to SHS in Ghana have technical training acquired from the classroom (i.e., Teacher training Institutions). However, his research did not show how headteachers and teachers can integrate classroom knowledge into the profession. This is because Kusi and Mensah (2014) argued that most headteachers and teachers rely on in-service professional learning programmes to build their skills for teaching students. Another study (Brundrett & Derring, 2006) suggested that

several formal classroom trainings are contributing to academic performance due to effective school leadership.

A 2019 study conducted by Quansah et al. exposed a significant need for senior high school (SHS) teachers to improve their skills in creating effective examinations. The research revealed several areas of concern, including limited content representativeness and relevance, and lack of reliability and fairness in assessment tasks. To address these issues, the study urged school principals and head teachers to prioritize regular training for teachers, aimed at enhancing their skills in constructing valid and effective test assessments. By doing so, teachers will be better equipped to evaluate student learning and understanding, ultimately improving the quality of education (Quansah et al., 2019). Such training should also incorporate hands-on, experiential learning methods whenever possible, to foster a more engaging and motivating learning environment. By incorporating practical experiences into the training, learners are more likely to be inspired and motivated to learn, leading to a more effective and sustainable learning outcome. The methodology of the research was not properly articulated.

The second intervention is the supervision of instruction. According to Sahin (2011), supervision of instruction is a systematic intervention implemented to ensure that school leadership implements planned changes effectively in the classroom. Some form of supervision takes place where authorities from agencies visit school leaders within the classroom to review teaching and learning impact and tools. A study by Abonyi (2017), indicated that supervision of instruction is an HRDI because it ensures the continuous monitoring and improvement of the school's human resources to enhance their professional development. The study also suggested that supervision needs to take place in a structured manner which values the school leader's contributions and promotes experimentation. Therefore, Amakyi (2022) stated that GES should set a structured format for the supervision of school leadership. Another study (Smith & Smith, 2015) indicated that there exists a positive correlation between the supervision of headteachers, headteacher functions and the academic performance of students. Their research indicated that feedback from supervision was a hallmark of school leadership in high-performing schools. Consequently, Armstrong (2014) believes that feedback is an important employee development tool. In another study by Amina (2015), it was argued that instructional supervision was the

responsibility of the headteacher and not external officers. The study found positive impacts of observing classroom teaching and learning activities with high academic performance.

In their book, *The Handbook for Human Resource Management Practice*, Armstrong and Taylor (2023) explained that to enhance teacher learning, school leadership should leverage instructional supervision techniques, particularly when teaching manual skills. They further argued that this structured approach involves a four-stage sequence. The first stage is preparation for each instructional supervision period. At this stage, the school leadership or head develops a comprehensive plan to present the subject matter, incorporating appropriate teaching methods, visual aids, and demonstration tools. The second stage is presentation. At this stage, the leader delivers a combined lecture and demonstration, providing a clear explanation of the skill. The aim should be to teach first things first and then proceed from the known to the unknown, the simple to the complex, the concrete to the abstract, the general to the particular, the observation to reasoning, and the whole to the parts and back to the whole again. The third stage is demonstration. At this stage, the leader provides a hands-on demonstration of the skill, allowing teachers to observe and practice. The final stage is the follow-up, where the leader offers ongoing support and feedback to ensure teachers have mastered the skill. According to the authors, by implementing this sequence, school leadership can optimize teacher learning and skill development to ensure academic performance.

Another HRDI is support for professional training. A study by Abonyi (2017) found that different educational systems are increasingly developing and implementing professional training for school leadership through a range of action modes and support mechanisms. The study found that implementing professional training impacts on the relationship between school leaders and performance. He further argued that some of the delivered professional training is customized to the specific needs of the school leaders. The study did not show the experiential approaches by which the school leaders transfer the learning back to the workplace. Studies (Manu et al., 2020; Sarrico et al., 2012; Timmermans & Thomas, 2015) indicated that an effective reform to improve the learning process and academic performance of secondary education must be supported by five external forces: parents and community, technology, stakeholders, government policy, and the teaching council. Manu et al. (2020) posited that the achievement of the school improvement objective is contingent upon establishing a harmonious

relationship among the five external forces. Mylona and Mihail (2022) underscored the recurrent theme of supportiveness in employee development, contending that the leader's degree of assistance and support significantly influences employee acceptance of performance reviews and overall job satisfaction. According to Armstrong and Taylor (2020), individuals must have a personal development plan which outlines the specific steps individuals intend to take to enhance their skills and knowledge. They suggested that while individuals are accountable for creating and executing their plans, they receive guidance and support from school leadership to ensure success. This collaborative approach empowers individuals to take ownership of their growth and development, with school leadership providing resources and encouragement to help them achieve their goals.

The final Human Resource Development (HRD) intervention considered in this context is coaching. Armstrong and Taylor (2020) defined coaching as a one-to-one method of helping people develop their skills and competence. A study by Agbodeka et al.'s study (2019) highlighted the notion that employees may possess the knowledge of what to do and how to do it, but occasional gaps may arise. These gaps may be attributed to flaws in the recruitment and selection process, suboptimal execution of orientation and initial training, or changes in tasks, organizational structure, or the work environment necessitating the acquisition of new knowledge or skills. Fournies (2000), as cited by Noe (2009), defines coaching as a face-to-face discussion between a supervisor and a subordinate aimed at redirecting the subordinate from undesirable behaviours to desirable ones. This study focuses on conducting a coaching analysis to identify effective strategies for enhancing performance. Fournies outlines a nine-step process to identify the causes of and solutions to suboptimal performance, recognizing the complex nature of poor performance and avoiding the tendency to blame solely the employee (Fournies, 2000, cited in Noe, 2009). It is noteworthy that the Ghana Education Service (GES) prioritizes coaching as a performance improvement activity, as evidenced by a substantially higher proportion of teachers being assigned for coaching. To excel in coaching, school leadership must recognize that their role is to facilitate learning and foster motivation in others. The individuals, selected to be coached, should acknowledge that their current knowledge, skills, and behaviours require continuous improvement to achieve optimal performance. By embracing this mindset, school leaders can create a supportive environment that encourages growth, development, and excellence among their team members. Additionally, Xu and Ko (2019)

suggested that many teachers shifted their approach to self-regulated-learning based instructions. Initially emphasizing students' complete autonomy in self-study, they later focused more on enhancing teachers' role in cultivating a high-level classroom environment

Armstrong and Taylor (2020), stated that coaching is often provided by specialists from inside or outside the organization who concentrate on specific areas of skills or behaviour, for example, leadership, but it is also something that can happen in the workplace. The need for coaching can arise from both formal performance reviews and informal daily interactions. Coaching opportunities can emerge at any time, and effective coaching involves: providing individuals with regular feedback on their performance, ensuring clarity on expectations, knowledge, and skills required to complete tasks successfully, leveraging everyday situations as learning opportunities, and encouraging individuals to think critically and develop solutions to complex problems. According to the authors, coaching may appear informal, but it requires careful planning and intentionality. It's not just about periodically checking in on someone's work and offering advice or criticism. Nor is it about simply pointing out mistakes and lecturing. Effective coaching involves working within a structured framework that identifies specific areas for growth and development, providing a clear direction for improvement. This approach ensures that coaching is purposeful, targeted, and aligned with individual and organizational goals (Armstrong & Taylor, 2020). The essence of coaching lies in its collaborative nature, where the coach supports the individual in achieving growth and success. This involves establishing clear objectives, delivering constructive feedback, and providing guidance to enable individuals to reach their fullest potential.

The preceding discussions highlighted the necessity of examining the moderation effect within the broader context of the study's variables. It was essential to investigate how the relationship between school leadership and academic performance is moderated by human resource development interventions. By testing the moderation effect, this study aimed to provide a more comprehensive understanding of the complex interactions between the study variables.

2.2.3 School Leadership, Learning Process and Academic Performance

According to Sidhu et al. (2021), mediation analysis is a statistical technique used to examine the relationship between an independent variable (predictor) and a dependent variable (outcome), while accounting for the influence of a third variable (mediator). The mediating variable plays a crucial role in elucidating the underlying mechanisms and processes that govern the relationship between the independent and dependent variables, thereby providing a more nuanced and detailed understanding of the research phenomenon. By incorporating mediation analysis into their research design, investigators can gain insight into the complex relationships between variables and develop a more comprehensive understanding of the underlying causal pathways. This, in turn, can inform the development of more effective interventions, programs, and policies.

To fully comprehend the purpose of mediation analysis, Baron and Kenny (1986) as found in Zhao et al. (2010) stated that it was essential to understand the different types of mediation. Mediation can be categorized into three main types: full mediation, partial mediation, and no mediation. Full mediation occurs when an indirect effect is present, but there is no direct effect. Partial mediation exists when both direct and indirect effects are present, indicating that mediation occurs alongside a direct effect. No mediation is characterized by a non-significant indirect effect, suggesting that the mediator does not play a mediating role between independent and dependent variables. However, simply categorizing a case as mediation or no mediation oversimplifies the complexity of mediation analysis. Researchers must further investigate whether the mediation is complementary (enhancing the direct effect), competitive (opposing the direct effect), or inconsistent (having different effects in different populations or conditions). A nuanced understanding of these mediation types and their underlying mechanisms is crucial for accurate interpretation and meaningful conclusions. Sebastian et al. (2017) found that the learning climate was the sole organizational factor connecting principal and teacher leadership with student achievement.

Despite numerous investigations into the relationship between school leadership and academic performance (Brew et al., 2021; Manu et al., 2020; Daniel, 2014; Mulatu & Bezabih, 2018; Teshome, 2017), divergent findings exist regarding the specific types of learning processes that mediate this relationship. This variance is attributed to the fact that school leadership frequently

establishes diverse learning processes aimed at enhancing academic performance. A study conducted by Usman and Madudili (2019) focused on assessing the mediating effect of the learning process on academic performance in Nigeria. The findings of the study indicated that the achievement of students' academic success is contingent upon the conducive learning environments fostered by school leadership. They concluded that the Education Ministry must intensify the quest to implement a serene atmosphere that focuses on the learner, knowledge, assessment, and the community while organizing the necessary elements of an ideal learning atmosphere to ensure that administrators of schools, teachers, and learners put up their best performance to enable Nigeria to create individuals whose academic performance can push the country to a better level on the global scale. However, their study used only secondary sources of data to make conclusions. The relevance of their research to this study is evident, as it scrutinized the influence of learning on the association between school leadership and academic performance.

Existing research indicates that school leadership leveraged the learning process to enhance academic performance, the learning process is apt to function as a mediator in the relationship between school leadership and academic performance. Several research (Alexander, 2017; de Janasz & Crossman, 2018; Runhaar et al., 2019) have argued that school leadership creates learning processes such as active learning, learning opportunities, career orientation, and cooperative learning to enhance the skills and knowledge of students, and also encourages morale for learning and understanding. Runhaar et al. (2019) found learning process to have an effect on the relationship between teacher career roles and student academic performance. For instance, Biruh's (2018) investigation delved into the impact of active learning on positive correlation between leadership and academic performance. The study posited that though active learning was beneficial the practices of active learning in educational institutions are low because of inadequate funds, a higher number of students per class, the perception of teachers about active learning, and lack of training on active learning to school leaders. The study did not show active learning as an instructional strategy. Rodrigues and Avila de Lima (2024) conducted a study on school instructional leadership and student achievement and reported that leadership on students' achievements were weak because they were not focused on student learning, but rather on school administration and management.

A study by Wang et al. (2023) on the mediating role of classroom learning climate in the relationship between teacher leadership style and student academic motivation found that classroom learning climate significantly mediated the association between teacher leadership style and academic motivation. The study theories were not properly articulated and it was also concentrated on students who had completed secondary school and had just entered into higher education. The current study focused on learning and motivation theories and also on students in the final year of secondary school. Wu et al. (2020) also found there were significant indirect effects of learning engagement on the relationship between leadership style motivations and academic performance. Also, Gumus and Bellibas (2020) conducted a study on the mediating role of self-efficacy learning on the relationship between professional development strategies and school principals' leadership practices and academic achievements and found a significant mediating effect.

According to Kılınç et al. (2024) there existed an indirect effect of distributed leadership style on student achievements through teacher-student classroom relationship. The study was conducted in Turkey and adopted the mediated effect model. The study also found that school principals' satisfaction exercised a significant effect on distributed leadership style. The study is important to the current study because of the construct of the distributed leadership style which was an anchored theory in the current study. However, Supervis et al. (2020) found self-efficacy learning practices to play a mediating role between leadership resilience and academic performance among adolescent students. However, Diaz et al. (2024) conducted a study on the mediating role of learning on school approaches and academic achievements and found that most learning indicators do not mediate the relationship between the school approach and course performance. Also, Domenech-Betoret et al. (2017) highlighted that students' expectancy-value beliefs mediated the relationship between academic approaches and student achievements. According to a study conducted by Shuja et al. (2019), there existed a mediating role of facilitating strategies (learning approaches) on the relationship between leadership strategies (m-learning) and students' academic performance.

Another study by Gannouni et al. (2018) on leadership and students' academic success found out that self-determination in the learning process mediates leadership and students' academic success. The study revealed a full mediation of learning determination through study autonomy

between school leadership and intention to achieve. The study concluded that leadership enhances the confidence and motivation of learners to learn and achieve their academic goals. Byrne (2016) defined active learning as the implementation of a diversity of explicit student-centred instructional strategies for student learning, which may integrate inquiry-based hands-on activities. Hence, in an examination of the impact of active learning on student performance, Mueller et al. (2015) underscored active learning as an instructional approach that involves student engagement through five strategies: visual, verbal, kinesthetic, social, and real-time feedback to enhance performance. Consequently, these empirical arguments imply a divergence of opinions concerning the facilitation of learning opportunities for students. Though the component of school leadership was missing in the study, it showed that for student performance to occur active learning must take into consideration the two constructs: cognitive and motivation. Cognitive learning engagement is how the student will initiate his or her learning by investigating a topic for a solution to a problem, and higher levels of cognition are needed for problem-solving. For motivation learning, he explained that one's motivation to learn was based on self-efficacy, intrinsic value and utility value. The expectancy-value motivation and cognitive engagement were chosen by the researcher to determine student active learning because of the difficult nature of topics at the final level. The study is highlighted by Ferreira et al. (2019) who argued that pedagogical processes promoted by school leadership within the school might either hinder or promote the learning. Ferreira et al. (2019) found that pedagogical learning process mediated the relationship between school leadership and student success.

Further, Valadas et al. (2017) examined the mediating effect of learning styles on students' academic performance and headteacher roles. Data was gathered through the Approaches and Study Skills for Students to assess the determinants of academic success. According to their findings perceived academic success in first-year students can be explained using previous academic success, course satisfaction, students' approach to learning, and study time. This research is of benefit to the study because it analyzes the mediating effect of indicators of students' academic achievement. The provision of learning opportunities and an environment to enhance students' learning (Armstrong, 2014; Noe, 2009) is an important factor that promotes the relationship between the principal's duties and students' academic achievements. According to Alexander (2017), students attend school to receive the opportunity to learn and the learning when provided effectively enhances the academic performance. The study, therefore, concluded

that learning process mediates the relationship between leadership provisions and student academic performance (Alexander, 2017).

However, according to Dinsmore et al. (2014), some schools or teachers offer more or less learning opportunities to their students, and, in large part, students cannot seek assistance and profit from those opportunities. The focus of educational research is to understand the learning opportunities that allow students to partake in school activities (Dumas, 2018). Dumas (2018) found learning opportunities as a mediator between school activities and student achievements. A community-based school normally fosters a learning environment extending far beyond the classroom walls (Melaville et al., 2006). However, Barnard-brak et al. (2010) found that a growing number of performing schools adopt courses – both during the regular school days and after school – that allow students to learn in their most enjoyed environment, Ferreira et al. (2019) found that the extent to which students connect the academic atmosphere and perceived learning is mediated by learning opportunities created by the cultural processes. Therefore, these arguments in empirical studies suggest that opinions are divided regarding the provision of learning opportunities for students.

Another facet of the learning process is learning opportunities, and research indicates that it serves as a mediator in the relationship between school leadership and academic performance. For instance, Alexander's (2017) study proposed that school leadership assumes responsibility for providing learning opportunities and creating an environment conducive to enhancing students' learning. The study reported a positive relationship, contending that students attend school with the expectation of gaining opportunities to learn (Alexander, 2017). However, according to Dinsmore et al. (2014), some schools or teachers offer more or less learning opportunities to their students, and, in large part, students cannot seek assistance and profit from those opportunities. The focus of educational research is to understand the learning opportunities that allow students to partake in school activities (Dumas, 2018). While Barnard-brak et al. (2010) found that a growing number of performing schools adopt courses – both during the regular school days and after school – that allow students to learn in their most enjoyed environment, Ferreira et al. (2019) found that the extent to which students connect the academic atmosphere and perceived learning is mediated by learning opportunities created by the cultural processes. Students perceive the various tools and processes such as the cooperative

learning process to enhance learning opportunities and achieve academic goals (Domingo & Garganté, 2016). In understanding how learners interact with learning opportunities, three loci may occur to the individual student: the student's ability and motivation to learn; the level of the school context (both the individual student and the school level support); and, the level of school climate (Dumas, 2018).

Another integral aspect of the learning process is cooperative learning. According to Astuti and Barratt (2018), cooperative learning is a structured learning process where students collaborate in small groups to accomplish shared objectives or tasks. This approach underscores teamwork, active engagement, and mutual assistance among peers. Its aim extends beyond academic success to include the development of social skills like communication, teamwork, and problem-solving. Astuti and Barratt (2018) explore diverse strategies and advantages of cooperative learning, emphasizing its role in creating a supportive learning atmosphere and enhancing student achievement. Armstrong and Taylor (2020), suggested that observing experienced colleagues in learning actions can significantly accelerate learning. Engaging in conversations, sharing experiences, collaborating on tasks, and providing mutual support can further deepen and solidify the learning process of students. This informal, social learning is considered vastly more effective in building proficiency than formal training methods, as it allows for hands-on experience, feedback, and guidance from others who have already mastered the skills. Rahman et al (2016) examined the influence of cooperative learning on students learning outcomes and found no significant relationship. The researchers adopted the quasi-experimental research. The researchers also examined the variables with only one subject, mathematics. Cooperative learning models are teaching strategies intended to foster group cooperation and interaction among students (Janah & Subroto, 2019).

Kwegyiriba et al. (2021) supported Slavin (2013) that, cooperative learning is a pedagogical method that involves student participation in the learning process to provide them with a comprehensive understanding of the subject matter. Slavin argued that cooperative learning contributes to elevated self-esteem, enhanced group cohesion, improved social relations, and a positive attitude toward learning (Johnson & Johnson, 2019; Johnson & Johnson, 2005). Students engaged in cooperative learning invest significantly in practical tasks and dedicate more time to practice compared to those who do not participate in cooperative learning. Johnson

and Johnson (2019) delineated five crucial elements for effective cooperative learning: positive interdependence, face-to-face promotive interaction, individual accountability, interpersonal and small group skills, and group processing. Cooperative learning structures prove beneficial as students learn from their peers (Kwegyiriba et al., 2021; Iqbal, 2004). A study conducted by Kwame and Samuel (2020) found that cooperative learning mediated the positive relationship between school leaders' function and academic performance. They argue that Ghanaian students perform better when they use a cooperative learning instructional strategy. Their findings reveal that irrespective of their gender, students profited equally through the cooperative learning strategy. Cooperative learning is very important to the SHS educational system because it gives high levels of improvement to the learning and performance of schools.

Another learning process is career orientation. Career orientation is an HRDI designed to enhance students' career development motivations to make more effective career decisions (Armstrong, 2014; Choi et al., 2015; Ohlsson & Borg, 2010). It is the management of different formal or informal methods (whether qualitative or quantitative) to support students in better understanding their behaviours, attitudes, aspirations, learning styles, personal styles, experiences, work values, and lifestyle needs (Edwards & Quinter, 2011). Education on a career is a lifelong process (Choi et al., 2015), which enables students to make decisions about education and job opportunities (Chachashvili-Bolotin et al., 2016). According to Education Bureau (2014), schools make use of tools or methods such as questionnaires and career assessment instruments to gather data reflecting affective development and attitude, social development, academic performance, and non-academic performance.

Researchers (Kwegyiriba et al., 2021; Choi et al., 2015; Ireh, 2000; Zacher et al., 2015) argue that life planning education or career orientation should be promoted early in the student's school life at the SHS level and in a coordinated manner. According to Loan and Van (2015), JHS and SHS students have different career orientation needs and found career orientation as a mediator in the relationship between leadership strategic solutions and academic achievements of secondary schools. Rivera and Li (2020) conducted a study on the potential factors to enhance student's learning and academic performance using career orientation. The findings suggest that with support from both teachers and parents, students can cultivate more favourable attitudes towards future post-secondary education and career paths. The theories of their study

were properly articulated and the study also examined the variables using the STEM education fields. To enhance high school students learning and academic performance, school leadership must examine the career orientations of the students and why they have the perspective of those careers.

The preceding discussions highlighted the necessity of examining the mediation effect of learning process within the broader context of the study's variables. It was essential to investigate how the relationship between school leadership and academic performance is mediated by learning process. By testing the mediation effect, this study aimed to provide a more comprehensive understanding of the complex interactions between the study variables.

2.2.4 School Leadership, Learning Process, Human Resource Development Interventions and Academic Performance

Hayes (2015) introduced the concept of moderated mediation, which extends traditional mediation analysis by incorporating a moderating variable that influences the mediation process. According to Hayes (2015), in moderated mediation, the relationship between the independent variable and the dependent variable is mediated by a third variable, but the strength and direction of this mediation depends on the levels of a fourth variable, the moderator. Hayes (2015) provided a framework for estimating and interpreting moderated-mediation models using regression-based approaches. This work has significant implications for understanding complex relationships in various fields, including psychology, education, and healthcare, by revealing how moderators can affect the underlying mechanisms and processes that drive outcomes.

In a school context, all the variables under investigation interact concurrently, wherein school leadership endeavours to enhance academic performance, the learning process mediates this progression, and concurrently, Human Resource Development Interventions (HRDI) moderate the strength and direction of this relationship. Consequently, a resultant moderated-mediation effect emerges when HRDI moderates the mediated impact of the learning process on the academic performance of Senior High Schools (SHS). Previous studies indicated the combined effects of HRDI and learning process on leadership and academic performance. For instance, Buabeng et al. (2020) conducted a study assessing how school leaders and teacher education moderate student achievements, advocating for the integration of theory and practice in

education to enhance academic performance. The study posits the necessity for reforms in the training and professional development activities provided to school leaders and teachers, while concurrently evaluating variations and structures in the implementation of learning processes. Although the methodology leading to certain explicit conclusions is not extensively delineated, the study is pivotal as it delves into the impact of educational reforms and the moderating effect of training on academic performance (Kwegyiriba et al., 2021).

Nudzor et al. (2015) conducted a study examining the interaction between school leadership, academic performance, learning processes, and training. The research identified a challenge in the implementation of HRDIs in Ghanaian schools, particularly the insufficient supply of teaching-learning materials, notably textbooks, over which school leadership lacks control. This inadequate provision negatively affects the relationship between variables. The study further revealed a deficiency in training for teaching active learning techniques, highlighting the role of school leaders in guiding, supporting, and modelling actions that facilitate the learning process for improved student academic performance. The study posits that HRDI moderates the learning process by influencing the learning environment and integrating social systems, contributing to the efficacy of school leaders in enhancing student academic performance. According to Buabeng et al. (2020), Ghana is among the African countries with poor academic performance globally.

A study by Para-Gonzalez (2018) on the mediating effects between transformational leadership and performance postulated human resource management practices and learning as having mediation roles. Warren's (2016) study emphasized the responsibility of principals and school leaders in shaping students' academic performance by creating high expectations and employing knowledge, preparation, training, and continuous professional growth. By instituting active learning, cooperative learning, career orientation, and learning opportunities (i.e., HRDIs), significant benchmarks are established for the learning process to stimulate academic performance. Wang and Zhang (2020) explored the perceived impact of teacher feedback on academic performance, with findings indicating that the frequency, difficulty, and variety of assessments exerted a moderating effect between the perception of teacher feedback and learner engagement, positively influencing the academic performance of students. This research is

pertinent to the present study as it elucidates the intricate dynamics of learning's influence on perceived teacher feedback and student academic performance.

Further, Dunbar et al. (2018) found a positive significant effect of learning environment and human resource capacity building in the relationship between leadership status and academic performance. Their research was a quantitative and longitudinal study. The study also concluded that in a collaborative learning environment, capacity building and leadership are important components of student achievement and should be considered a priority when designing secondary school curricula. Also, Azure (2015) examined the opinions of SHS students as regards integrated science education in Ghana. The study suggested an approach tailored towards the production of science teachers who can tutor integrated science as a whole or as a component in the classroom. He employed a descriptive survey and a quantitative method. He explained that the poor performance of SHS students during WASSCE reflects a deficiency in schools as regards the teaching and learning of integrated science, rendering them unqualified for further studies. He argued further that the teacher employs impracticable teaching approaches which make the illustration of concepts in real-life situations difficult. This hinders the inspiration of students to learn science, mathematics, and technology. However, Azure's work does not give any theoretical underpinning to the study.

Another study by Schlebusch et al. (2020) on collaborative leadership and sustained leader academic performance in secondary schools found collaborative leadership to be positively correlated to academic performance. The study also found that the relationship between collaborative leadership and academic performance was affected by human resource intervention processes and learning methods within the schools. The research adopted the open-ended questionnaire approach. However, in a study by Munir and Khalil (2016), the research found that teacher perceptions were the main element affecting the relationship between the principals' leadership styles and the academic performance at the secondary school level. The study adopted training and development programmes and learning methods as mediating effects. Nevertheless, Khan et al. (2020) conducted a study on instructional leadership and students' academic performance and found elements such as better-trained teachers, teaching work, and teaching workgroups to influence the relationship between instructional leadership and students'

academic performance. The study was, however, limited to primary education and therefore findings cannot be generalized to secondary education.

According to Belay et al. (2021), professional learning and teaching climate mediates the influence of school leadership on school performance. The study was employed a correlational design and collected data from 379 randomly selected primary schools. Since the study was based on primary education the findings cannot be generalized to secondary education since the models differ. Also, the theories in the study were properly articulated. The study highlights the importance of effective leadership in fostering a work environment that promotes employee engagement, innovation, and overall organizational performance. Balwant et al. (2019) conducted a study on transformational instructor-leadership and academic performance, a moderated mediation model of student engagement and structural distance. The findings of the study supported that student engagement was a full mediator, but structural distance was not supported as a moderator. The study, further, suggested that the teachers should be placed in professional training groups and discourage structural distance. Gakenia et al. (2017) found that leadership capacity development and learning resource availability affected the influence of strategic leadership style on the academic performance of national schools in Kenya. The researchers concluded that school leadership style as a sole variable was unable to influence the academic performance of their schools. The study adopted the descriptive research design. However, the present study adopted the cross-sectional design.

A study by Obama et al. (2016) on the principals' leadership style and students' academic performance in public secondary schools revealed that school principals utilize diverse approaches such as the creation of a conducive learning environment and support to teachers to influence students' academic performance. The study adopted the ex-post facto research design and also a combination of stratified random sampling and purposive sampling techniques. The present study adopted the cross-sectional design and cluster-stratified random sampling technique to select respondents. In addition, Ghavifekr and Ramzy (2020) conducted a study on exploring effective school principals' leadership and students' learning achievement. The study revealed that the influence of principals' leadership on students' learning achievements was affected by teacher's professional development, instructional supervision, and provision of a conducive learning environment. Another study by Maponya (2020) on the instructional

leadership role of school principals on learners' academic achievements identified several key elements that instructional school leadership had on learner academic achievements. Some of the elements included enhanced learner academic achievement, motivational and positive influences on learners, effective instructional management, creation of a supportive and inclusive teaching and learning culture, provision of learner support and guidance, fostered parental involvement and engagement, strategic and flexible use of various leadership styles to adapt to diverse contexts and needs. These elements, according to Maponya (2020) underscored the critical role that instructional leadership plays in promoting academic excellence, motivating learners, and cultivating a positive educational environment that supports the overall success of students.

A study by Tedla and Redda (2021) on school leadership styles and school performance revealed that the professional development of school principals and the creation of a learning environment affected the school leadership styles and overall school performance and student attainments. The study adopted the descriptive design. Another study conducted by Tanieh (2013), assessed the determinants of academic performance in basic schools. His study employed a mixed-method design using questionnaires and interview guides to determine the relationship that exists between school leadership, students, parents, and academic performance. The study reveals that a lot of factors amount to low academic performance. These include the school factor, the teacher factor, student character, and home-based factors. Some of the things identified under the school factor include deficiency in teaching-learning materials, inadequately skilled teachers, and employee time theft. Findings under teacher factors include the incidence of lateness to school, the incidence of absenteeism, and the unnecessary use of local dialect during teaching. Under student character, incidences such as lack of punctuality, absenteeism, and lack of support at home were recorded. Some home-based factors include parents' low interest in the academic performance of their wards and their zero participation in PTA. However, his study is limited to school and cannot be generalized to the entire country. His study is relevant to this research because he recommends a change in the learning process, and the need to sensitize parents and students to amend their behaviours towards education, provide adequate teaching-learning materials, and increase incentives given to teachers. A study by Mayasari et al. (2021) revealed that the principal's leadership, teacher performance and teaching methods had a partial and simultaneous relationship with student achievements.

Consequently, Askell-Williams and Koh (2020) the quality of teachers and the effectiveness of school principals in driving school improvement are influenced by a dynamic interplay between two key factors: enhanced classroom practices and teacher training. This interaction suggests that teacher development and school leadership are interconnected and mutually reinforcing and that improvements in one area can have a positive impact on the other. Their study found that school leadership invests significantly in various resources in personal and economic resources, selecting and implementing programs, advocating for the program to staff and students, purchase of learning materials, and providing staff with professional development opportunities. These investments demonstrate the critical role school leadership plays in supporting teacher development, improving instruction, and enhancing student learning outcomes

The preceding discussions highlighted the necessity of examining the moderated-mediation effect within the broader context of the study's variables. It was essential to investigate how the relationship between school leadership and academic performance is influenced by the potential moderator (i.e., human resource development interventions), and how this impact is mediated by the other factor (i.e., learning process). By testing the moderated-mediation effect, this study aimed to provide a more comprehensive understanding of the complex interactions between the study variables.

2.3 Summary of Knowledge Gaps

The literature review revealed notable limitations and inconsistencies in existing research, highlighting areas that require further investigation. The reviewed studies yielded diverse and sometimes conflicting findings on the study variables, indicating a need for further exploration. The identified knowledge gaps in the literature provided a clear direction for the present study, which aims to address these gaps and contribute to the existing body of knowledge. Specifically, the study sought to address the gaps identified in Table 1, providing a focused approach to bridging the existing knowledge deficits.

Table 1: Summary of Research Gaps

Author	Area of Study	Methodology	Findings	Knowledge Gap	Focus of the Current Study
Atteh et al. (2020)	The Perception of JHS and SHS Teachers about the Incorporation of ICT in the Teaching and Learning of Mathematics in Schools	A cross-sectional design survey	Findings revealed that incorporating ICT in understanding and instructing Mathematics in schools is very vital as it can improve academic performance.	Contextual gap: their work is limited to ICT and mathematics.	The present study adopted all core subjects taught in SHS.
Kitur et al. (2020	Relationship between Principals' Transformational Leadership Style and Secondary School Students' Academic Performance in Kenya Certificate of Secondary Education in Bomet County, Kenya	Descriptive survey design	The findings revealed a strong significant relationship between school leadership styles and academic performance in secondary schools in Kenya and found	Methodological gap: the study employs descriptive research design.	The present study assessed how school leaders improves learning and academic performance through HDRIs and adopted the cross-sectional design
Tan (2018)	Examining the school leadership effects on student academic achievements: the role of contextual challenges and constraints	An empirical study	The study found school leadership effects accounted for a greater proportion of between-school achievements between different categories of students.	Contextual gap: the study is limited to mathematics achievements	The present study adopted all core subjects taught in SHS and a cross-sectional design survey.
Azure (2015)	Senior High School Students' View on the Teaching of Integrated Science in Ghana	A quantitative method	The findings revealed the teaching methods used are not practical enough.	Theoretical Gap: the theories underpinning this study are not properly articulated.	The present study related the study to learning, leadership, and motivation theories.

Author	Area of Study	Methodology	Findings	Knowledge Gap	Focus of the Current Study
Mutuku et al. (2021)	The moderating effect of school infrastructure on the relationship between human resource management practices and the academic performance of secondary schools in Kenya,	Mixed Methods design	The study found that human resource management practices such as training and development moderated the influence of proper decision-making in the secondary school and the student's academic performance.	Methodological gap: the study employs mixed methods approach	The present study adopted the quantitative approach
Bryson et al. (2023)	Is Pupil Attainment Higher in Well Managed Schools	An experimental study	The study found that better recruitment strategies and training have an intense influence on the management of schools and academic performance.	Theoretical Gap: the theories underpinning this study are not properly articulated.	The present study related the study to learning, leadership, and motivation theories, and also adopted the cross-sectional design survey.
Bush and Glover (2021)	Research on school leadership in South Africa: A system review on the impact of human resource development on school leadership and student achievement	An experimental study	The study found a positive impact. The study concluded that aspects of human resource development interventions that focuses on leadership development, teacher training, and capacity building impacted positively on the relationship between school leadership and academic performance.	Methodological gap: the study employs an experimental design.	The present study assessed how school leaders can improve learning and performance through HDRIs and adopted the cross-sectional design survey
Dampson, et al. (2018)	The impact of distributed leadership in Public SHS regarding school improvement	Explanatory Sequential Mixed-Method design	The findings revealed that problems of distributed leadership include orthodox ways of leadership, and lack of collaboration between teachers and leaders.	Content gap: the study addresses how leadership affects school improvement	The present study assessed how school leaders can improve learning and performance through HDRIs and adopted the cross-sectional design survey.

Author	Area of Study	Methodology	Findings	Knowledge Gap	Focus of the Current Study
Gakenia et al. (2017)	Influence of strategic leadership style on academic performance of national schools	A quantitative study	The findings revealed that leadership capacity development and learning resource availability affected the influence of strategic leadership style on the academic performance of national schools	The study adopted the descriptive research design.	The present study adopted the cross-sectional design survey.
Huaisheng et al. (2019)	The Role of School Leadership on Academic Performance: An Issue for Ghanaian Public Senior High Schools	A descriptive research design	The results suggest the necessity for an augmentation of school management functions within public Senior High Schools to bolster the academic performance of students.	Methodological gap: the study employs descriptive research design.	The present study assessed how school leaders can improve learning and performance through HDRIs and adopted the cross-sectional design
Wang et al. (2023)	The mediating role of classroom learning climate in the relationship between teacher leadership style and student academic motivation	A quantitative study	found that classroom learning climate significantly mediated the association between teacher leadership style and academic motivation.	The study theories were not properly articulated and it was also concentrated on students who had completed secondary school and had just entered into higher education.	The present study focused on learning and motivation theories
Luschei et al. (2021)	School governance and student academic achievements: Cross-National Evidence from the 2015 PISA	A quantitative method	The study found that an increase in teacher decision-making was consistent with improve academic performance in mathematics, reading, and science studies.	Theoretical Gap: the theories underpinning this study are not properly articulated.	The current study related the study to learning, leadership, and motivation theories.

Author	Area of Study	Methodology	Findings	Knowledge Gap	Focus of the Current Study
Owan et al. (2018)	School Management and Students' academic performance in secondary schools in Nigeria	A quantitative study	The findings revealed that there was a positive relationship between school management and students' academic performance	Theoretical Gap: the theories underpinning this study are not properly articulated.	The current study related the study to learning, leadership, and motivation theories.
Dunbar et al. (2018)	Student social self-efficacy, leadership status, and academic performance in collaborative learning environments	Their research was a quantitative and longitudinal study.	The study found a positive significant effect of learning environment and human resource capacity building in the relationship between leadership status and academic performance.	Methodological gap: Their research was a quantitative and longitudinal study.	The present study adopted the cross-sectional design survey
Belay et al. (2021)	Advancing teachers' human capital through effective leadership and school performance: mediating effect of professional learning and teaching climate	The study employed a correlational design	The study found that professional learning and teaching climate mediates the influence of school leadership on school performance.	Methodological gap: The study employed a correlational design Also, the theories are not properly articulated	The present study adopted the cross-sectional design survey. Also, the present study also related the study to learning, leadership, and motivation theories.
Adu-Gyamfi et al. (2016)	Educational reforms in Ghana: Past and present	Qualitative study	The findings illuminate that Ghana's situation underscores the notion that investments in quality have yielded enhancements in quality, emphasizing that the intrinsic value of quality is not solely linked to the length of the academic year or duration per se.	Methodological gap: this study adopts a qualitative method.	The present study adopted the quantitative method.

2.4 Hypotheses of the Study

The study focused on the four objectives. Based on the literature reviewed, the four hypotheses were formulated to correspond with the objectives. These hypotheses were designed to assess the influence of school leadership (independent variable) on academic performance (dependent variable), the moderating effect of human resource development interventions on the relationship between school leadership and academic performance, the mediating effect of learning process on the relationship between school leadership and academic performance, and the combined moderating and mediating effect of human resource development interventions and learning process on the relationship between school leadership and academic performance of public senior high schools in Ghana.

The formulated null hypotheses were:

H_{01}: There is no significant relationship between school leadership and academic performance in public Senior High Schools (SHS) in Ghana.

H_{02}: Human Resource Development Interventions do not exert a statistically significant moderating effect on the relationship between school leadership and academic performance in public SHS in Ghana.

H_{03}: The learning process does not significantly mediate the relationship between school leadership and academic performance in public SHS in Ghana.

H_{04}: There is no significant moderated-mediation effect of human resource development interventions and learning process on the relationship between school leadership and academic performance in public SHS in Ghana.

2.5 Conceptual Framework for the Study

The study examined the interconnections among school leadership, human resource development interventions, the learning process, and academic performance within public Senior High Schools (SHS) in Ghana. Building on the insights gleaned from the reviewed literature, it was posited that both human resource development interventions and the learning process exerted substantial influences on the relationship between school leadership and academic performance. Consequently, Figure 1 presents the conceptual framework.

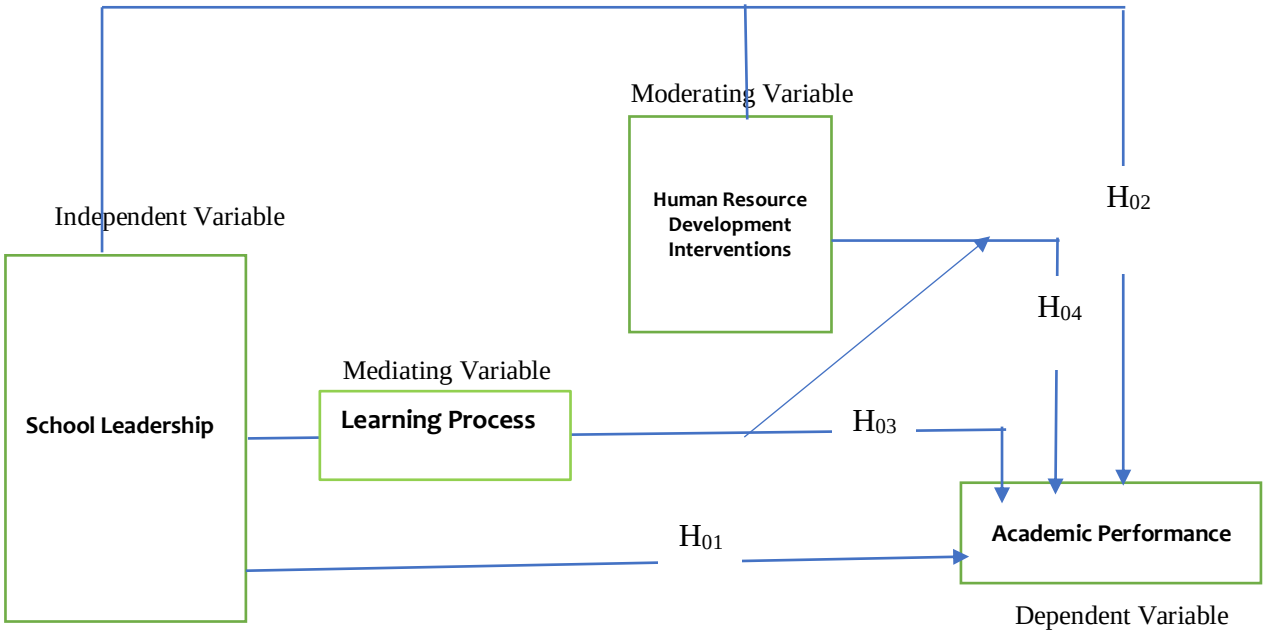

Figure 1: Conceptual Framework

2.6 Operationalization of Study Variables

The study variables were measured in the study as per Table 2 below:

Table 2: Operationalization and Measurement of Study Variables

Variable	Type of Variable	Indicators	Measurement Scale	Tools of Analysis
School Leadership	Independent	• Clear and inspiring school vision • Effective leadership for teaching and learning • Capacity to improve the school. • Productive relationship with parents, SMC, and PTA	5 point-Likert Scale	Ordinal Scale
Learning Process	Mediating	• Active learning • Career orientation • Learning opportunities • Cooperative learning	5 point-Likert Scale	Ordinal Scale
Human Resource Development Intervention	Moderating	• Technical training • Instructional Supervision • Support for professional development • Coaching	5 point-Likert Scale	Ordinal Scale
Academic Performance	Dependent	• School WASSCE performance in the core subjects (i.e., English, Mathematics, Integrated science, social studies) • School's end-of-term performance in the core subjects (i.e., English, Mathematics, Integrated science, social studies) • School's mock performance in the core subjects (i.e., English, Mathematics, Integrated science, social studies) • Pass rate • Students' participation in classroom activities	5 point-Likert Scale	Ordinal Scale

2.7 Chapter Summary

This research examined the interconnections between school leadership, learning processes, human resource development interventions, and academic performance. Chapter two delves into the theoretical foundations of the study, presenting frameworks such as distributed leadership, social learning theory, reinforcement theory, and goal-setting theory. The chapter also synthesizes existing empirical literature on the study variables, examining the relationships between school leadership (independent variable), learning processes (mediating variable), human resource development interventions (moderating variable), and academic performance (dependent variable), providing a comprehensive understanding of the theoretical and empirical underpinnings of the study. The reviewed studies yielded diverse and sometimes conflicting findings on the study variables, indicating a need for further exploration. The identified knowledge gaps in the literature provided a clear direction for the present study, which aimed to address these gaps and contribute to the existing body of knowledge

CHAPTER THREE
METHODOLOGY

3.0 Introduction

The methodology section delineates the research procedures: the design to be used; the identification of the study population; the procedure to sample respondents; the study data collection technique; and the methods to analyze the data collected. Additionally, this section addresses ethical considerations and data analysis strategies. Given the study's objective of testing hypotheses and examining the relationships between variables, a quantitative methodology is deemed most appropriate. This approach enables the researcher to rigorously test the formulated hypotheses and investigate the associations between school leadership, HRDI, learning process, and academic performance.

3.1 Research Philosophy

A research philosophy comprises the overall conceptual framework that a researcher may work on. It refers to the basic belief system guiding the investigation (Mohajan, 2018). According to (Saunders et al. 2020; Seyfi et al. 2019; John, 2016), research philosophy is the fundamental belief that underpins the selection of a research position. The positivism philosophy guides research in social sciences (Seyfi et al., 2019) and empiricism is the root of positivist philosophy (Mohajan, 2018). According to Seyfi et al. (2019), the positivist approach assumes that the researcher is objective and separate from the research process and that knowledge is based on empirical facts rather than personal biases or interpretations. The knowledge of positivist philosophy is grounded in observable data and is independent of personal opinions, values, or beliefs. The positivist approach focuses on uncovering objective truths through systematic observation and measurement, without considering the researcher's perspectives or assumptions. In essence, positivism seeks to uncover facts untainted by personal influence, according to Saunders et al. (2020).

The present study adopted the positivist philosophy. This is because according to Mohajan (2018), positivism assumes that the methods used in studying human behaviour should be identical to the methods used in conducting scientific research. The positivist approach focuses on the aspect of social science (Saunders et al., 2017) and knowledge development in a field is founded on objectivity, precision and scientific rigour (Mohajan, 2018). With the positivist philosophy, the variables under study could be analyzed and treated systematically. The use of

the positivist philosophy will help the researcher reduce the cost involved in data collection from schools and the entire research. In addition, the knowledge carried out in the positivist philosophy is valid, hence the researcher could be referenced. The use of the positivist philosophy will enable the researcher to adopt methods that are easily controlled, measured, or interpreted to be used to support the hypothesis.

3.2 Research Design

A research design can be classified based on factors such as the study purpose, the dimension of time involved, topical scope, the environment of the research, and the researcher's ability to produce effects in the study variables (Saunders et al. 2020; Cooper & Schindler, 2013). Mohajan (2018) suggested that a study is cross-sectional where the variables are measured over a relatively short period. The present study adopted the cross-sectional design survey to assist the researcher in describing the phenomenon, predicting changes in the dependent variable and describing much changes will be caused by the predictor variables by deriving the predictive regression models. Also, Cummings (2018) revealed that a cross-sectional design is a more accessible and cost-effective research approach compared to longitudinal and experimental designs. This is because cross-sectional designs involve observing all variables at a single point in time, making data collection more straightforward and less resource-intensive. As a result, researchers can gather data quickly and at a lower cost, making cross-sectional designs a convenient option for exploratory studies or preliminary investigations.

Further, Leavy (2022) suggested five different research design approaches that researchers utilize in their research. These include quantitative, qualitative, mixed methods, arts-based, and community-based participatory research. The quantitative research design focuses on numerical data, statistical analysis, and experimental designs to test hypotheses and predict phenomena. The present study adopted the quantitative research approach. This is because a study by Rahman (2020) revealed that quantitative research methods involved larger sample sizes and typically required less time for data collection, as they focus on numerical data and statistical analysis. The quantitative research design approach enables researchers to collect data quickly and efficiently, often through surveys, questionnaires, or experiments, and analyze it using statistical software. The larger sample size and faster data collection process allow for generalizable findings and conclusions. The suggestions by Rahman (2020) are supported by Ahmad et al. (2019), who stated further that quantitative research design is common among

social scientists because of its reliability in conducting simple analysis in an extremely sophisticated research context.

3.3 Target Population

The target population is the entirety of individuals or subjects for the study (Castillo, 2019). In this study, the population are the nine hundred and twenty-eight (928) public senior high schools in the sixteen (16) regions in Ghana listed by the Ghana Education Service as of December 2023 (Ghana Education Service, 2023). The schools are not evenly distributed among the regions. According to the GES, each public SHS has a School Management Committee (SMC) with a chairperson, a headmaster or headmistress, two to three assistant headmasters or headmistresses, heads of departments of the subject areas (i.e., Mathematics Department, Social Studies Department, Science Department, and English Department). Table 3 shows the distribution of schools per the regions of Ghana for the study.

Table 3: Distribution of Target Population across the regions of Ghana

Region	Category of School			Total number of Schools
	Category A	Category B	Category C	
1. Greater Accra	15	18	70	70
2. Ashanti	11	64	99	174
3. Ahafo	3	14	9	26
4. Bono East	1	14	18	33
5. Volta	5	15	72	92
6. Central	12	24	59	95
7. Western North	1	10	9	20
8. Western	7	16	30	53
9. Northern	4	4	34	42
10. Savannah	0	0	16	16
11. Oti	0	4	27	31
12. Eastern	16	39	66	121
13. Upper West	4	8	32	44
14. Upper East	6	3	40	49
15. North East	1	0	15	16
16. Bono	6	27	13	46
Total	**92**	**260**	**576**	**928**

Source: Ghana Education Service, (2023)

3.4 Sampling design

According to Saunders et al. (2017), sampling refers to the systematic selection of a subset of individuals or cases (research units) from a larger target population or universe, to represent the characteristics of the entire population. It involves choosing a portion of the population, known as a sample, to serve as a representative of the whole, allowing researchers to draw inferences and make generalizations about the population based on the sample's characteristics. The study adopted a systematic technique of selecting the sample to ensure regularity. Kothari's sampling formula (Kothari, 2013) was employed in the present study to select the sample size. The formulae used and the calculation to arrive at the sample was as follows:

$$n = \frac{Z^2 Npq}{d^2\left(N-1\right) + Z^2 pq}$$

Where:

N = estimated total number of schools (i.e., N=928), n = Sample size, p = Population reliability (where p is 0.5 & $p+q = 1$), Z = Normal reduced variable at 0.05 level of significance (Z = 1.96), and d = sample error (in this case, the d=5%). The researcher has applied an estimated population correction to the formula.

$$n = \frac{(1.96)^2\ x\ 0.5\ x0.5\ x\ 928}{(0.05)^2(928-1)+[(1.96)^2 x\ 0.5\ x0.5\ ]} = 272 \text{ schools}$$

Based on this calculation, the researcher proposed to use a sample size of 272 schools for the quantitative study. According to Battaglia et al. (2016) and Dillman (2003), a sample size of more than a hundred is sufficient to provide a fair representation of the study application. The study further employed the cluster-stratified random sampling technique of the probability method to identify the respondents for the study from sixteen strata as per the regions of Ghana (Table 3). The distribution of selected sample size per the regions of Ghana is found in Appendix IV. The Kothari (2013) formula was applied to the distribution in the selection of schools in the regions.

The respondents comprised of school leadership categorised into school management committee chairperson, headmaster/headmistress, assistant headmasters/headmistresses (i.e., in charge of Academics and Administration duties), and heads of departments of core subjects (i.e., in charge of

Science, English, Mathematics, & Social Studies). The distribution of respondents is shown in Table 4.

Table 4: Distribution of Respondents

Designations	Number in Each School	Number of Schools	Respondents
1. School Management Committee Chairperson	1	272	272
2. Headmaster/Headmistress	1	272	272
3. Assistant Heads Masters/Mistresses (i.e., in-charge of Academics and Administration duties)	2	272	544
4. Heads of Departments (i.e., in-charge of Science, English, Mathematics, & Social Studies)	4	272	1088
Total Respondents			**2,176**

Source: Ghana Education Service, 2023

From Table 4, therefore, the total number of respondents (i.e., final sample size) from the 272 sample schools for this quantitative study is 2,176.

The total number selected for each respondent category was school management committee chairperson = 272; headmaster or headmistress = 272; Assistant headmasters or headmistress = 544; and, heads of departments = 1088. The effectiveness and success of the research design and methodology have a direct impact on the population and sample size, influencing the generalizability of the findings, precision of the results, representation of the population's characteristics, and accuracy of the conclusions drawn. In other words, the research design and methodology can affect the quality and reliability of the data collected, which in turn affects the validity of the findings and their applicability to the larger population.

3.5 Data Collection and Instruments

According to Castillo (2019), data collection refers to the systematic process of gathering relevant information, whereas data collection instruments are the tools used to measure and collect data on specific variables of interest. These instruments, such as surveys, questionnaires, or experiments, are designed to collect data in a structured and standardized way, allowing researchers to answer specific research questions, test hypotheses, and evaluate outcomes. By using these instruments, researchers can ensure that the data collected is reliable, valid, and relevant to their study, ultimately contributing to meaningful insights and conclusions.

Researchers (Leavy, 2022; Saunders et al., 2017; Mohajan, 2018; Castillo, 2019) have discussed the different data collection methods. Some of them include primary, secondary, experiments, case studies, and mixed methods.

Primary data was chosen for the present study for its efficiency in information collection within the study's limited timeframe. With primary sources, the exact information sought are obtained. According to Saunders et al. (2017), primary data collection involves collecting original data through experiments, surveys, questionnaires, interviews, and observations. For the present study, structured questionnaires served as the primary data collection instrument due to their efficacy in obtaining information quickly. The study adopted the closed-ended questionnaire method. Mohajan (2018) highlighted that questionnaires are unique in terms of structure and place in social research, and they are less expensive than other instruments. The study questionnaires, which were arranged according to the objectives of the study, were also divided into three sections: section "A" focused on the demographic characteristics of respondents, while sections "B" and "C" utilized a closed-ended format to elicit responses related to the study variables. The study employed a five-point Likert scale (ranging from 1 "Strongly disagree" to 5 "Strongly agree") to facilitate the measurement of the variables.

3.6 Pilot Study

According to Ravitch and Riggan (2012), pilot testing is a preliminary assessment of the study instruments to determine their viability and effectiveness before proceeding with the study. This initial evaluation helps to identify any potential issues, refine the guide, and ensure that it is clear, effective, and capable of yielding valuable insights, thereby laying a solid foundation for the thesis study. Pilot testing was employed to refine the questionnaire and mitigate potential challenges respondents may encounter in answering the questions. The instruments were piloted with 27 senior high schools, representing 10% of the sample size, to ensure that the respondents understood the questions. The researcher randomly selected 216 respondents for the pilot study. According to Arain et al. (2010), maintaining high precision, a pilot test size ranging from 1% to 10% of the sample size is considered optimal for effective pilot testing, contributing to the enhancement of the research questionnaire's effectiveness. The pilot respondents and data were not included in the main study to ensure that the main study was not conducted on respondents who had prior knowledge of the questions to influence their responses and therefore prevented bias.

3.6.1 Validity

Validity, within the context of an instrument, pertains to its capacity to measure the intended construct (Mohajan, 2018). It reflects the extent to which a measurement instrument successfully reveals or quantifies its intended target (Bryman & Bell, 2015). Validity encompasses three main types: face and content validity, concurrent and predictive validity, and construct validity (Kumar, 2011). The research instruments were scrutinized through content and construct validity procedures. Content validity, as described by Kumar (2011), involves aligning the questions with the research objectives and evaluating their appropriateness within the instrument. As recommended by Cooper and Schindler (2013), content validity was examined using the identified scale from existing literature, and the data were structured to the selected respondents. The questionnaires were appraised by the supervising professors and pretested based on the standard set by scholars who argued that a simple content validity test can be done by asking for the views of participants and pre-testing (Ghauri & Grønhaug, 2010). For testing construct validity, the researcher adopted the Keyser Meyer Olkin (KMO)-Berlette's test. A KMO-Berlette test value greater than 0.4 and a p-value less than 0.05 were accepted as valid and adequate for the measure.

3.6.2 Reliability

Reliability, on the other hand, characterizes the extent to which a test is devoid of measurement errors (Godfred, 2015). Ghauri and Grønhaug (2010) posited that reliability denotes the consistency of results over time and their accurate representation of the studied population. The reliability of the questionnaire is measured using Cronbach's alpha. According to Hopkins (2017), Cronbach's alpha is stable and flexible in determining the internal consistency or interrelatedness of items. The alpha may assume any value from zero to one. Researchers such as Clark et al. (2018) suggested that the minimum figure of acceptability is an alpha value of 0.7. This study adopts the alpha value of 0.7 as the minimum acceptance figure for the reliability of the measurement scale. According to Sileyew (2019), a low alpha ($\alpha<0.7$) shows poor interrelatedness among the items and a high alpha ($\alpha>0.9$) implies that some items were redundant, repetitive and are testing the same items.

3.7 Data Processing and Analysis

Data processing and analysis constitute a very important stage of the present study. To ensure the quality of the data processing and analysis, all returned questionnaires were initially checked for completeness and consistency of responses. The researcher replaced all errors with correct information and ensured follow-up field checks where necessary. The data were then coded. Coding is the process of translating the responses into categories usually numbered for purposes of analysis. Subsequently, the collected data were codified and analyzed using version 27 of the Statistical Package for the Social Sciences (SPSS) software. The quantitative data was analyzed using both descriptive and inferential statistics encompassing mean and standard deviation calculations to analyze the hypotheses of the study. Descriptive statistics provided a summary of the data, while inferential statistics, including correlation analysis and multiple regression analysis, were used to draw conclusions and make predictions about the population based on the sample data. Specifically, correlation analysis examined the relationships between variables, and multiple regression analysis identified the predictors of outcome variables.

3.7.1 Diagnostic Test

Inferential statistics such as correlation and regression analysis were conducted on the study hypotheses. Before the regression analyzes were conducted, various diagnostic tests were also conducted to test for ordinary least square (OLS) assumptions including the normality test, linearity test, homoscedasticity, and multicollinearity. A normality test, specifically the Shapiro-Wilk test at a critical value of 0.05, was conducted on the study variables. If the p-value was less than 0.05, the null hypothesis was rejected. The test of normality was satisfied before the regression model was utilized. To assess the correlation between variables, a multicollinearity test was conducted utilizing the variance inflation factor (VIF) to gauge the level of correlation between dependent and independent variables. The decision rule was that the multicollinearity would be problematic and harmful to the study in instances where any of the VIF values obtained were greater than 10. The study needed the multicollinearity to be less than 10 but greater than zero. A homoscedasticity test was conducted to show that the variance of the error term was constant along the regression model.

To test the variance if the error term in the regression model does not vary, the researcher used the Breusch-Pagan/Godfrey test to test for heteroscedasticity. Using the scatter plots, a linearity test was conducted to measure whether there was a straight-line relationship of the variables.

Where the scatter plots followed a linear pattern, it explained that the linearity assumption had been met for the model. The Researcher adopted tables and figures to present the results of the various tests.

3.7.2 Hypotheses Testing

A hypothesis outlines the predicted relationship between the variables under investigation, as depicted in the conceptual model, providing a clear and concise statement of the expected outcome. In other words, a hypothesis specifies the variables being studied, describes the expected connection between the variables, and, aligns with the conceptual model's framework (Saunders et al., 2020). The present study was focused on four variables (i.e., school leadership, learning process, human resource development interventions, and, academic performance), and four objectives, which correspond with four hypotheses. The null hypotheses tests were focused on: the relationship between school leadership and academic performance in public Senior High Schools (SHS) in Ghana; the moderating effect of human resource development interventions on the relationship between school leadership and academic performance in public SHS in Ghana; the mediating effect of learning process on the relationship between school leadership and academic performance in public SHS in Ghana; and, the moderated-mediation effect of human resource development interventions and learning process on the relationship between school leadership and academic performance in public SHS in Ghana.

The first hypothesis was tested as a direct model using simple linear regression. The moderation model null hypothesis and the mediation model null hypothesis were tested using the stepwise approach recommended by Baron and Kenny (2004). The moderated-mediation model was tested using stepwise simple regression models, with the final step being a multiple regression model. The study set the significance level at 5% ($\alpha = 0.05$) for all tests, and the evaluation focused on the study's objectives. The study hypothesis was tested using the model specifications in Table 5. Each test model is explained below.

1. Direct Model

The statistical significance of school leadership on academic performance was tested using the simple linear model. The study adopted the regression model equation:

$$AP = ß_0 + ß_1 SL + è$$

Where, AP = Academic Performance of public senior high schools; SL = School Leadership; $ß_0$ = Constant; $ß_1$ = Regression Coefficient; and è = Error term

2. Moderation Model

A moderating variable alters the nature of the relationship between predictor variables and an outcome variable, either amplifying, diminishing, or transforming the impact of the predictor variable on the outcome. In other words, a moderating variable change the strength (i.e., makes it stronger or weaker) of the relationship, changes the direction (positive or negative) of the relationship, and also influences how the predictor variable affects the outcome. To conduct the moderation test, three regression models were used. The models were presented as:

$$\text{Model 1: } AP = ß_0 + ß_1\, SL + è$$
$$\text{Model 2: } AP = ß_2 + ß_3\, SL + ß_4\, H + è$$
$$\text{Model 3: } AP = ß_5 + ß_6\, SL + ß_7\, H + ß_8\, SL*H + è$$

Where, AP = Academic Performance of public senior high schools (Dependent variable), SL = School Leadership (Independent variable), H = HRDI (the moderator), $ß_{0,}\, ß_{2,}\, ß_5$ = Constant; $ß_{1,}$ $ß_3$, $ß_4$, $ß_{6,}\, ß_{7,}\, ß_8$ = Regression Coefficient; and è = Error term.

The first model shows the prediction of academic performance against school leadership. In the second model, school leadership and HRDI were predicted against academic performance. Finally, in the third model, academic performance was regressed against school leadership, HRDI and the interaction term of school leadership and HRDI (SL*H). The tests were conducted using the mean scores of the study variables.

3. Mediation Model

A mediation model modifies the relationship between the independent variable and the dependent variable, indicating that the independent variable's effect on the dependent variable is indirect, operating through a third variable (the mediator). In other words, the mediator variable plays a crucial role in transmitting the influence of the independent variable on the dependent variable, thereby altering the nature of their relationship.

To conduct the test of mediation using the Baron and Kenny method, four regression models were used. The models were presented as:

$$\text{Model 1: } AP = ß_0 + ß_1\, SL + è$$
$$\text{Model 2: } L = ß_0 + ß_1\, SL + è$$
$$\text{Model 3: } AP = ß_9 + ß_{10}\, L + è$$
$$\text{Model 4: } AP = ß_{12} + ß_{13}\, SL + ß_{14}\, L + è$$

Where, AP = Academic Performance of public senior high schools (Dependent Variable), SL = School Leadership (Independent Variable), L = Learning process (Mediator), $ß_{0,}$ $ß_{9,}$ $ß_{12}$ = Constant; $ß_{1,}$ $ß_{10}$, $ß_{13}$, $ß_{14}$ = Regression Coefficient; and è = Error term.

The first model shows the prediction of academic performance against school leadership. In the second model, the direct effect of school leadership on the learning process was estimated. Learning process were predicted against academic performance in the third model. Finally, in the fourth model, academic performance was regressed against school leadership and learning process.

4. Moderated-Mediation Model

The null hypothesis of the moderated-mediation model was analyzed using the school leadership with the interaction term of the learning process and human resource development interventions as a guide and using the two models:

$$\text{Model 1: } AP = ß_{16} + ß_{17}\, SL + ß_{18}\, H + ß_{19}\, SL * H + è$$
$$\text{Model 2: } AP = ß_{20} + ß_{21}\, SL + ß_{22}\, L + è$$

Where, AP = Academic Performance of public senior high schools (Dependent Variable), SL = School Leadership (Independent Variable), H = HRDI (Moderator), L = Learning process (Mediator), SL*H = the interaction term of school leadership and human resource development interventions, $ß_{16}$, $ß_{20}$ = Constant; $ß_{17,}$ $ß_{18}$ $ß_{21,}$ $ß_{22}$ = Regression Coefficient; and è = Error term.

Table 5: Summary of Research Objectives, Hypothesis, and Empirical Models

Objective	Hypothesis	Type of Analysis	Interpretation of Results
To explore the relationship between school leadership and academic performance of public SHS in Ghana.	H_{01}: There is no statistically significant relationship between school leadership and academic performance in public Senior High Schools (SHS) in Ghana.	Linear regression Analysis $AP = ß_0 + ß_1 SL + è$ Where: AP = Academic Performance SL = School Leadership $ß_0$ = Constant $ß_1$ = Regression Coefficients è = Error term	R^2 Coefficient of 1 indicates perfect predictability of the model P-value ≤0.05 shows a significant correlation between the variables. ANOVA F-test with p-value ≤0.05 shows that the model has the predictive ability.
To investigate the moderating effect of HRDI on the relationship between school leadership and academic performance of public SHS in Ghana.	H_{02}: Human Resource Development Interventions do not exert a statistically significant moderating effect on the relationship between school leadership and academic performance in public SHS in Ghana.	Regression Analysis i. $AP = ß_0 + ß_1 SL + è$ ii. $AP = ß_2 + ß_3 SL + ß_4 H + è$ iii. $AP = ß_5 + ß_6 SL + ß_7 H + ß_8 SL*H + è$ Where: AP = Academic Performance SL = School Leadership H = HRDI $ß_0, ß_2, ß_5$ = Constant $ß_1, ß_3, ß_4, ß_6, ß_7, ß_8$ = Regression Coefficients è = Error term SL*H = interaction term	R^2 Coefficient of 1 indicates perfect predictability of the model P-value ≤ 0.05 shows that the effect is significant. ANOVA F-test with p-value ≤0.05 shows that the model has predictive ability.

Objective	Hypothesis	Type of Analysis	Interpretation of Results
To determine the mediating effect of the learning process on the relationship between school leadership and academic performance of public SHS in Ghana.	H_{03}: The learning process does not significantly mediate the relationship between school leadership and academic performance in public SHS in Ghana.	Regression Analysis i. $AP = ß_0 + ß_1 SL + è$ ii. $L = ß_9 + ß_{10} SL + è$ iii. $AP = ß_9 + ß_{10} L + è$ iv. $AP = ß_{12} + ß_{13} SL + ß_{14} L + è$ Where: AP = Academic Performance SL = School Leadership L = Learning Process $ß_0, ß_9, ß_{12}$ = Constant $ß_1, ß_{10}, ß_{13}, ß_{14}$ = Regression Coefficients è = Error term	R^2 Coefficient of 1 indicates a perfect predictability of the model P-value ≤ 0.05 shows that the effect is significant. ANOVA F-test with a P value of ≤0.05 shows that the model has predictive ability.
To examine the moderation effect of HRDI on the mediating role of learning process on the relationship between the school leadership and academic performance of public SHS in Ghana.	H_{04}: There is no statistically significant moderated mediating effect of the learning process and Human Resource Development Interventions on the role of the learning process in the relationship between school leadership and academic performance in public SHS in Ghana.	Regression Analysis (i) $AP = ß_{16} + ß_{17} SL + ß_{18} H + ß_{19} SL * H + è$ (ii) $AP = ß_{20} + ß_{21} SL + ß_{22} L + è$ Where: AP = Academic Performance SL = School Leadership L = Learning Process H = HRDI $ß_{16}, ß_{20}$ = Constant $ß_{17}, ß_{18}, ß_{19}, ß_{20} ß_{21}, ß_{22}$= Model parameters Coefficients è = Error term	P-value ≤0.05 shows a significant correlation between the variables. ANOVA F-test with a p value of ≤0.05 shows that the model has predictive ability.

3.8 Ethical Considerations

According to Clark et al., (2018), ethical considerations in research encompass the practices and procedures that ensure the protection and well-being of both human and non-human participants, the appropriate use and application of technology, that conclusions, inferences, and recommendations are grounded in the actual research findings, and that research reports are comprehensive, accurate, and unbiased, presenting a truthful representation of the study's outcomes. Clough and Nutbrown (2002) suggested that researchers must be more than technically competent and ensure ethical standards when conducting research. The present study strictly adhered to ensuring the highest ethical standards in research on the thematic areas of privacy, safety, consent, fairness, and data protection. In each of the selected schools, a debriefing session was conducted to explain the purpose of the research to participants.

3.8.1 Informed Consent

The present study ensured that participants gave their consent. The researcher ensured that the participants' rights to be informed were observed. An introductory letter issued by the Management University of Africa (MUA) was submitted to various authorities to seek permission at the offices of the Ministry of Education, Ghana Education Service, Regional Education Offices and selected schools. The purpose of the study was discussed with the participants before they proceeded to answer the questions. The researcher explained the data collection, the use of the data, and storage procedures to participants. Participants were allowed to control their data and withdraw consent if they desired.

3.8.2 Privacy and Confidentiality

The study guaranteed the privacy and confidentiality of participants. The researcher ensured that responses from participants were not disclosed outside of the study, to ensure confidentiality and data protection. The study avoided the collection of sensitive information. Variables such as names, sex, identity card numbers, social security numbers or any other particulars that can be used to directly identify a participant were excluded from the questionnaire. Where personal and sensitive information was erroneously issued, the researcher ensured that it was encrypted and not stored as part of the data. The data collected were stored securely and access was limited to only personnel involved in the research. Personal data information was destroyed and not stored.

3.8.3 Anonymity

To ensure anonymity, the selected schools were coded to satisfy the ethics of the research. Most importantly participants' identities were not revealed. The analysis of the data was not related to names or other forms of identification. Analysis and reporting of data collection and findings was done in aggregate form to prevent individual identification. Due to the technology used in collecting the data, encrypted files, password-protected documents, and a secured server was utilized. Data collected was also not shared with anyone outside the research study. The study avoided the collection of sensitive information, such as names, addresses and phone numbers that could compromise anonymity. The data was monitored and audited to ensure that anonymity was maintained.

3.8.4 Voluntary Participation

To ensure voluntary participation, participants were informed about the purpose of the research that it was for academic requirements and that the findings and results were to be made available to the public. The researcher explained the data collection, the use of the data, and storage procedures to participants to ensure voluntary participation. Participants were informed that participation in the research was voluntary and participation could be withdrawn anytime. No participant was coerced or pressured to participate in the research, and no participant was forced to remain in the study. No participant was requested to pay a penalty for withdrawing their participation. Participants were persons who showed their voluntary participation in answering the questions.

3.9 Chapter Summary

This chapter outlines the methodology used in the study. The study employed a positivist approach to systematically examine school leadership, human resource development interventions, the learning process, and academic performance. The research utilizes a cross-sectional design to explore the relationships between these variables. Data was collected using quantitative methods through self-administered questionnaires distributed to respondents from a population of 928 public senior high schools in Ghana as of December 2023. Sample schools were selected using a Cluster-Stratified random sampling technique across 16 strata, resulting in 2176 respondents. Additionally, Cronbach's alpha was employed to assess the reliability of the questionnaire.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the results and analysis of the data collection. The data collected was codified and analyzed using the Statistical Package for the Social Sciences (SPSS) version 27 and with the use of descriptive statistics and inferential statistics. The results are presented in tables, and figures in this chapter. Descriptive statistical analysis was conducted on the demographic data information of respondents. The study further conducted a pilot test of the instruments and reliability analysis of the inter-items. The hypotheses were tested using the multiple regression model specifications. The findings represent interpretations of the results, while the discussions will either confirm or reject the hypothesis. Furthermore, the chapter examines how the findings align with or conflict with previous research reviewed in this study.

4.2 Response Rate

Data on the response rate is crucial to the credibility of the results. Sampling bias may occur due to a low response rate, especially where there are unequal nonresponses among participants concerning their exposure and/or outcome. A low response rate can diminish the statistical power of collected data, compromising result reliability. It may hinder the researcher's capacity to generalize findings to the broader target audience. The response rate is obtained by matching the issued questionnaire against the returned questionnaire.

A total of one thousand nine hundred and sixty (1960) questionnaires were issued after the pilot study had been conducted. The results show that thousand nine hundred and forty-nine (1949) were returned, representing 99.44%, as shown in Table 6.

Table 6: Response Rate

Questionnaire	**N**	**%**
Returned	1949	99.44%
Not returned	11	0.56%
Total	**1960**	**100%**

Mugenda and Mugenda (2013) and Kothari (2013) suggested that a response rate exceeding 50% suffices for a cross-sectional study. Similarly, Babbie (2004) argued that a return rate above

50% is acceptable for analysis and publication, with 60% considered good and 70% very good. Therefore, with a 99.44% response rate, the study was deemed very good, implying that it was representative of the population. The satisfactory high response rate is attributed to the strategies adopted by the Researcher, which included the use of Research Assistants, pilot testing of the instruments, early notification of the exercise to the respondents, the conduct of the exercise during the first week of the first term of the schools, the observation of ethics in research such as seeking the consent of respondents, maintaining the anonymity of respondents, and maintaining the confidentiality of information received.

4.3 Demographic Characteristics of Respondents

The present study sought to describe the social background of the participants. The study, therefore, examined the demographics of the participants. Demographics refer to population characteristics that furnish data about research participants, essential for determining whether individuals in a study constitute a representative sample of the target population for generalization purposes. Demographic analysis is conducted to examine how the population evolves, which is crucial for understanding population changes. This analysis enables us to study shifts within the population. Descriptive statistical analysis was conducted on the demographic data information (i.e., gender, designation, educational qualifications, and work experience) of Respondents. The results of the testing are presented under each of the demographic sections.

4.3.1 Gender of the Respondents

The gender demographics were important for this study to establish the gender diversity in the population group. Respondents were requested to indicate their gender with limitations to the traditional gender groups of male and female as recognised by the national laws of Ghana. The results for the gender demographics are shown in Table 7.

Table 7: Gender of Respondents

	N	%
Male	1412	72.4%
Female	537	27.6%

The results in Table 7 show that there were 1412 representing 72.4% males and 537 representing 27.6% females. The results are of the implication that there is gender diversity in the sector,

though more males are found. Zaid et al. (2020) presented compelling evidence suggesting that gender diversity correlates with improved firm performance. Gender diversity in organisations is expected to enhance transparency and positively impact corporate governance, particularly in entities with limited external oversight mechanisms.

4.3.2 Designation of Respondents

The study sought to establish the categories of respondents. This is important to the study since the study is based on school leadership. Therefore, since the selection of respondents was cluster-stratified random sampling, the various components of school leadership were expected to be represented to maintain the scope of the study. Respondents were asked to indicate their positions in the school. The results for the designation of respondents are found in Table 8.

Table 8: Position of Respondents

	N	%
SMC Chairperson	141	7.2%
Headmaster	184	9.4%
Assistant Headmaster	767	39.4%
Head of Department	857	44.0%

The results in Table 8 show that School Management Council (SMC) Chairpersons were 141 representing 7.2%, Headmasters were 184 representing 9.4%, Assistant Headmasters were 767 representing 39.4%, and Heads of Departments were 857 representing 44%. The results show that the various categories of school leadership were represented.

4.3.3 Education Qualifications of Respondents

Education level in this study denotes the academic qualifications or degrees acquired by a participant. This was determined by analyzing the frequency of respondents' answers within the education qualification of the questionnaire. The participants were requested to specify their educational attainment level. The results of the education qualification attainment levels are shown in Table 9.

Table 9: Education Qualification

	N	%
Certificate	42	2.2%
Diploma	249	12.8%
Bachelor's Degree	1041	53.4%
Post Graduate Degree	605	31.0%
Other	2	0.1%
Missing Values	10	0.5%

The results in Table 9 show that the majority of the participants were Bachelor Degree holders with 53.4% of the total participants. This is followed by participants with postgraduate degrees at 31% and diplomas at 12.8%. Only 2.2% of the participants were holders of a certificate. The results also show that 10 representing 0.5% were missing values not included in the analysis. Mesároš et al. (2017) suggest that education level serves as a fundamental step and presumption for improved performance and outcomes for managers. Higher levels of education among employees enhance the conditions for achieving successful results in organizational management. However, it's important to note that knowledge and a high level of education are just one aspect contributing to successful outcomes. The study found that the NTC was conducting licensure examinations for all teachers and head teachers of the teaching profession in the country.

4.3.4 Work Experience of Respondents

The study aimed to determine the duration of time the respondents had worked in the school, which served as an indicator of their level of experience in school leadership. This was assessed by analyzing the frequency of respondents' answers regarding their years worked in the schools in the questionnaire. The results are shown in Table 10.

Table 10: Years worked in the schools

	N	%
Less than 3years	92	4.7%
Between 3 and 6years	896	46.0%
Between 7 and 10years	803	41.2%
Above 10years	152	7.8%
Missing Values	6	0.3%

The results in Table 10 indicate that a significant portion of the participants had worked in the schools for 3-6 years, accounting for 46%, followed by 7-10 years, representing 41.2%. Those with over 10 years of experience and above constituted 7.8%, while individuals with less than 3 years comprised 4.7%. This suggested that the participants possessed extensive experience of the schools and their roles. The significance of experience and years of service for employees lies in the accumulation of knowledge over time, leading to improved decision-making and leadership within the school. The results also show that 6 representing 0.3% were missing values not included in the analysis. Experience gained over the years enables employees to carry out tasks more effectively and efficiently (Plaskoff, 2017). With the majority of participants possessing over 3 years of experience, there is ample opportunity for leveraging this experience to enhance decision-making and leadership processes within the schools.

4.4 Pilot Testing Results

One of the key underlying principles of the study was to conduct pilot testing of the questionnaires. The pilot testing period was used by the researcher to explain all the questions to the respondents. Conducting a pilot test on the research instrument provided an opportunity for the researcher to gather feedback on the clarity of the questions and assess whether the instrument aligned with the research as intended. In this study, the instruments were initially tested in the study area with 216 participants from 27 schools to limit the challenges that respondents may have towards the questions, and increase the response rate. The instruments for the pilot study were presented to the selected respondents at the school campus. The instruments were explained to the understanding of the respondents. Respondents were given one week to make the completed questions available. A total of 193 respondents were returned, resulting in an 89.35% response rate. The data from pilot study was not included in the main study. The pilot tests encompassed validity and reliability assessments. The pilot study was challenged in three ways. The first was that during the period some schools were on vacation and some of the respondents were unavailable. The researcher utilized the available respondents for the pilot study. The second challenge was that some respondents stated that the one week was inadequate for them to complete the questionnaire. As a result, some of the questionnaires were not returned. The third issue was that some of the schools selected were in very remote places with unmotorable roads. The researcher had to use different and inconvenient forms of

transportation to access the schools and respondents. However, these challenges did not affect the main study.

4.4.1 Validity Testing

Content Validity

To attain content validity, the developed data collection instruments were presented to experts in the fields of leadership, human resource management, and learning. Feedback from these experts was incorporated into the survey tool to enhance clarity, comprehensiveness, relevance, meaning, and depth as needed. Additionally, the instrument underwent review by peers pursuing PhDs in management and leadership at MUA University, with their comments taken into account. Supervisors also conducted a final review, providing valuable recommendations that were used to refine the instrument. This rigorous process ensured that the measurement scale items effectively translated theoretical concepts into practical constructs for the study. As experts affirmed the measure's comprehensive coverage of the concept, it was deemed to have achieved face validity, as noted by Zikmund (2003).

Construct Validity

The adequacy of the sample size was assessed using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. According to Yin (2014), the KMO statistic helps determine the suitability of conducting factor analysis, indicating whether the collected data is adequate for inferential statistical tests like factor analysis and regression analysis. The KMO statistic ranges from 0 to 1, with values closer to 1 suggesting that correlation patterns are compact, which means that factor analysis is likely to reveal distinct and meaningful factors.

A Kaiser-Meyer-Olkin (KMO) and Barlette's test of sphericity was conducted to measure how suited the data was for Factor Analysis. The rule was that a KMO-Berlette test value greater than 0.4 and p-value less than 0.05 would be accepted as valid and adequate for the measure. The results of the test are shown in Table 11.

Table 11: Construct Validity

Variable	KMO Value	Sphericity
School Leadership	0.798	<0.001
Learning process	0.935	0.000
Human Resource Development Interventions	0.645	0.000
Academic Performance	0.731	0.000

Based on the results in Table 11, all statements and variables are deemed valid, effectively measuring what they intended to measure. All variables met the minimum KMO value of 0.4 and Bartlett's test of sphericity of less than 0.05, indicating their validity. School Leadership achieved a KMO value of 0.798 and Barlette's test of sphericity of less than 0.001, Learning process attained a high KMO value of 0.935 and a Barlette's test of sphericity of 0.000, Human Resource Development Interventions obtained a KMO of 0.645 and a Barlette's test of sphericity of 0.000, and Academic performance demonstrated a KMO of 0.747 and a Barlette's test of sphericity of 0.000.

4.4.2 Reliability Analysis

The inter-item reliability was tested using Cronbach's alpha. The test was conducted to determine the degree to which the instruments were free from measurement errors. The rule was that the minimum acceptance figure for the reliability of the measurement scale was an alpha value of 0.7. The results of the test are shown in Table 12.

Table 12: Reliability Analysis

Variable	Respondents	Initial Items	Cronbach alpha	Items after deleting	New Cronbach	Comments
School Leadership	1949	9	0.761	9	0.761	Acceptable
Learning Process	1949	22	0.709	22	0.709	Acceptable
Human Resource Development Interventions	1949	19	0.525	14	0.750	Acceptable
Academic Performance	1949	14	0.428	8	0.748	Acceptable

The results in Table 12 indicate that the Cronbach's Alpha for all items under the School Leadership and Learning process variables were above 0.7, signifying that the instrument

demonstrated sufficient reliability for measurement. However, the statements regarding human resource development interventions and academic performance initially yielded lower Cronbach's alpha values of 0.525 and 0.428, respectively. After removing five items from the human resource development interventions variable, Cronbach's alpha value of 0.750 was obtained. Also, after removing six items from the academic performance variable, a Cronbach's alpha value of 0.748 was obtained. The acceptable Cronbach's Alpha values were adopted for further analysis.

4.5 Diagnostics Testing

The study conducted various diagnostic tests to ensure that the assumptions of the Classical Linear Regression Model (CLRM) were not violated and to choose the appropriate models for investigation if the CLRM assumptions were violated. Therefore, before running the regression model, pre-estimation and post-estimation tests were conducted. The pre-estimation tests in this case included the normality test, multicollinearity test, heteroscedasticity test, and linearity test.

4.5.1 Test for Normality

Testing for normality is a way to determine if the data is well-modelled and follows a normal distribution. This involves looking at the data graph and assessing whether it deviates significantly from a bell-shaped normal distribution. It helps assess the likelihood of a random variable being normally distributed, which is important in statistical tests. Avioli (2019) demonstrated that descriptive, normality, and verification tests could be evaluated using the normal distribution, while Singh and Masuku (2018) suggested that non-normality in these tests could be due to outliers, multiple modes, incorrect measuring tools, incorrect distributions, zero/infinite limits, or insufficient data. The dependent variable must be normally distributed for a linear model to be fitted. Tests for normality include the Shapiro-Wilk test, Kolmogorov-Smirnov test, and Anderson-Darling test.

In this study, the Shapiro-Wilk test, known for its high power, was used to test for normality. The normality hypothesis was tested at a critical value of 0.05, following the rule that the null hypothesis is rejected if the probability (P) value is less than 0.05. Multiple regression requires that the variables be normally distributed. The hypothesis for testing the normality of the data was that:

H_0: The data is not normally distributed

H_1: The data is normally distributed

The normality test results can be found in Table 13.

Table 13: Test of Normality

	Shapiro-Wilk		
	Statistic	df	Sig.
School Leadership	.926	1949	.000
Learning Process	.966	1949	.000
Human Resource Development Interventions	.909	1949	.000
Academic Performance	.951	1949	.000

According to Table 13, the Shapiro-Wilk test for normality shows that all variables have p-values below 0.05, indicating that the data is normally distributed. As a result, the study does not reject the alternative hypothesis (H_1). Therefore, the data sets for all variables are normally distributed: school leadership (0.926, p-value = 0.00); learning process (0.966, p-value = 0.000); human resource development interventions (0.909, p-value = 0.000); and, academic performance (0.951, p-value = 0.000). The study concludes that school leadership (independent variable), learning process (mediating variable), human resource development interventions (moderating variable), and academic performance (dependent variable) all exhibited normal distributions, allowing for further analysis.

4.5.2 Multicollinearity Test

In regression analysis, one of the key assumptions is the absence of multicollinearity, which happens when two independent variables are highly correlated. The study used the Variance Inflation Factor (VIF) as an index to investigate multicollinearity between the variables. The VIF is a widely accepted measure for detecting the presence or absence of multicollinearity. The general rule is that if the VIF value is below 10 and the Tolerance value is greater than 0.2, then there is no multicollinearity. The multicollinearity results are detailed in Table 14.

Table 14: Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	School Leadership	.833	1.200
	Learning Process	.851	1.175
	Human Resource Development Interventions	.966	1.035

From the findings in Table. 14, all the study variables (i.e., school leadership, learning process, and human resource development interventions) had Tolerance values greater than 0.2 and VIF values less than 10. According to Myres (2015), VIF values of 10 or greater indicate the presence of multicollinearity. In this case, there was no evidence of multicollinearity among the independent variables.

4.5.3 Heteroscedasticity Test

The presence of heteroscedasticity refers to the situation in which the variability of a variable differs across the range of values of a second variable that predicts it. In this study, a heteroscedasticity test was conducted using the square of the Residuals to conduct the Breusch-Pagan test in SPSS software since a straight Breusch-Pagan test could not be conducted in SPSS. This test aimed to examine whether the error terms exhibit correlation across observations in the cross-sectional data. If the p-value is lower than the critical significance level of 0.05, we reject the null hypothesis. The null hypothesis for the heteroscedasticity test was formulated as follows:

H_0: Data among the variables are homoscedastic

H1: Data among the variables are not homoscedastic

The test results are found in Table 15.

Table 15: Heteroscedasticity Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.909	3	.303	2.108	.097[b]
	Residual	279.508	1945	.144		
	Total	280.416	1948			

a. Dependent Variable: Sresiduals

b. Predictors: (Constant), Human Resource Development Interventions, Learning Process, School Leadership

The results of the Heteroscedasticity test in Table 15 showed a p-value of 0.097, which is greater than 0.05. As a result, the study does not reject the null hypothesis. The alternative hypothesis was rejected at a critical P-value of 0.05, indicating that the data among the variables did not exhibit heteroscedasticity.

4.5.4 Linearity Test

The concept of linearity in statistical analysis assumes a direct, straight-line connection between independent and dependent variables. This relationship allows for easier-to-interpret models, and linear effects are straightforward to measure and explain. This study assessed linearity by examining scatter plots of all independent variables against the dependent variable using the SPSS software. The analysis revealed that all independent variables displayed a linear relationship with the dependent variable, as illustrated in Figure 2.

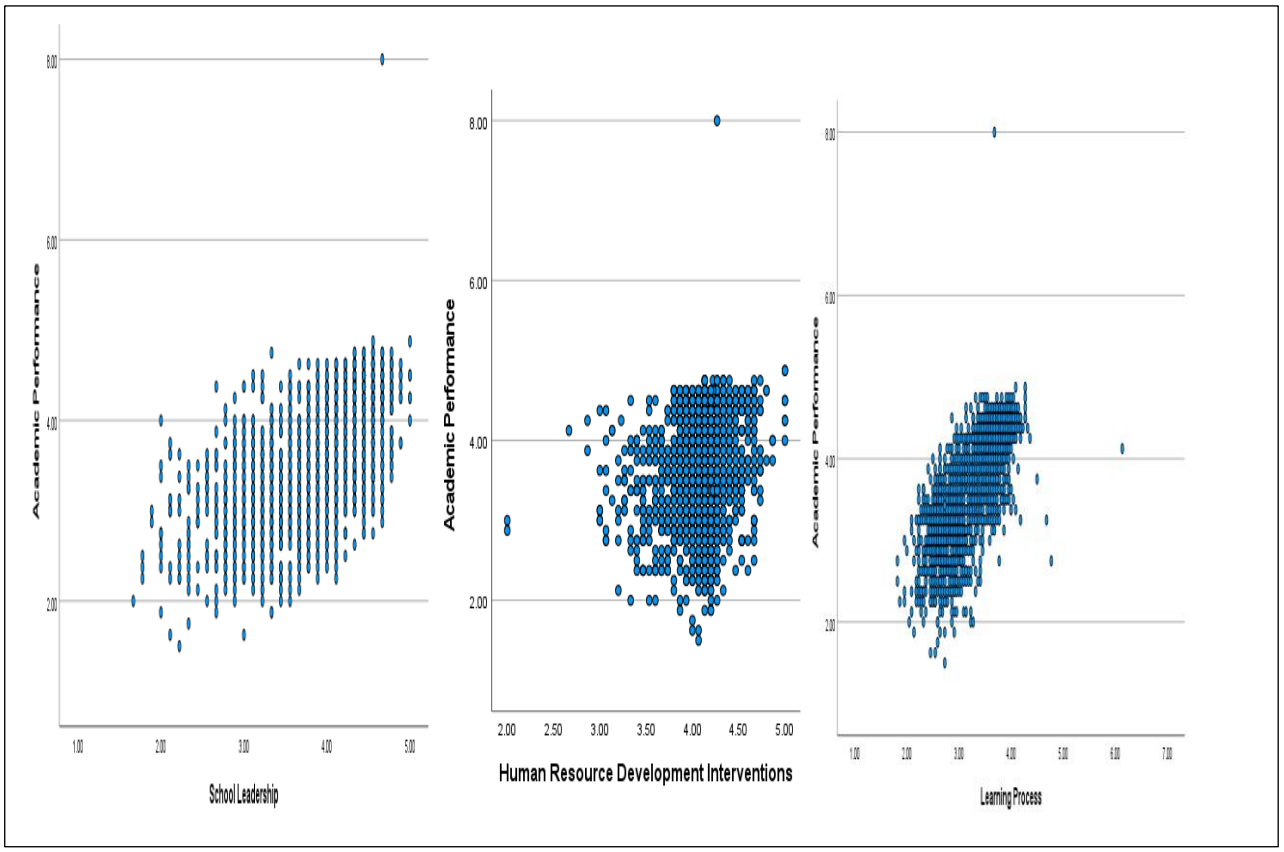

Figure 2: Scatter Diagram of School Leadership, HRDI, Learning Process showing linear relationship

4.5.5 Factor Analysis

Factor analysis is a statistical method used to condense information from multiple variables into smaller dimensions, known as factors while retaining as much of the original information as possible. It is commonly used to analyze variables that cannot be directly measured and to summarize large data sets. Howard (2016) opines that factor analysis explains the relationship between the variables. He suggested that authors should verify that their data meets statistical assumptions in research. According to Howard (2016), the acceptable Eigen value for factor analysis is 0.6, and if a lower value is obtained, it can be removed to improve the suitability of the factor analysis. This present study adopted the recommendations of Watkins (2021) that, factors with Eigenvalues (total variance) greater than 0.5 should be retained, while those below 0.49 should be removed from the analysis as they are not considered significant. This is because the process identified by Watkins (2021) simplifies and makes sense of the data by identifying underlying factors. Eigenvalues play a crucial role in this process, as they enable the reduction of complex operations into simpler ones and help in understanding the interrelationships between variables by defining the factors (Watkins, 2021). Denton et al. (2022) indicated that eigenvalues were not widely known until recently. Factor analysis was conducted on all the study variables.

4.5.5.1 School Leadership

The study examined school leadership as an independent variable predicting a change in the dependent variable, academic performance. The study employed factor analysis to examine the school leadership variable, using SPSS version 27 for dimension reduction. The analysis initially considered the nine statements, but those with factor loading values below 0.5 were excluded because they were considered not significant. The resulting factor loading values for the school leadership variable are presented in Table 16, providing insight into the underlying structure of this construct.

Table 16: Factor Analysis of School Leadership

School Leadership		Factor loading	
		Before reduction	No reduction
1.	SMC possess the required knowledge and skills	.71	.71
2.	The school has a clear vision known by stakeholder	.73	.73
3.	The school has a strategic plan to support teaching and learning	.81	.81
4.	The school Board does not interfere with work of headteachers	.79	.79
5.	Headmaster relates positively with SMC & PTA	.59	.59
6.	Headmaster & teachers have demonstrated a capacity to improve teaching	.69	.69
7.	SMC evaluates performance of Head & Teachers	.71	.71
8.	Headmaster & teachers have demonstrated a capacity to improve learning outcomes	.71	.71
9.	Formative evaluation of Head & Teachers enhances academic performance	.63	.63

The study adopted Watkins (2021) that factors with Eigenvalues (total variance) greater than 0.5 should be retained, while those below 0.49 should be removed from the analysis as they are not considered significant. From the results, under school leadership, no statement was dropped since all statements had factor analysis values of greater than 0.5 as shown in Table 16. The results reveal statements such as "The school has a strategic plan to support teaching and learning" and "The school board does not interfere with the work of headteachers" had values of 0.81 and 0.79, respectively. These high values indicated strong associations with the factor determining the strength and direction of school leadership.

4.5.5.2 Learning Process

The study examined learning process as a mediator of the relationship between school leadership and academic performance. The study conducted a factor analysis test on twenty-two statements of the learning process variable. The test was conducted using version 27 of the SPSS's dimension reduction. The study sought to remove statements with a factor loading value of less than 0.5 because they were not considered significant. The test results of the factor loading of the learning process variable are contained in Table 17.

Table 17: Factor Analysis of Learning Process

	Factor loading	
	Before reduction	No reduction
1. The school provides up-to-date information relevant to the lesson being taught	.72	.72
2. The school ensures that teaching instructions are clear	.71	.71
3. The school ensures that teaching and learning materials clarify learner's understanding of lesson	.65	.65
4. The school provides teaching and learning models	.68	.68
5. The school ensures that teaching and learning materials link lessons	.65	.65
6. The school ensures that Teachers utilize strategies to determine and guide learners' level of understanding	.75	.75
7. The school ensures that Learners are tasked on a structured curriculum	.63	.63
8. The school ensures that Teachers provide task that engage and challenge learners	.63	.63
9. The school ensures that Teachers teach by asking open-ended questions	.80	.80
10. The school ensures that Teachers adjust teaching to the level of the learners	.68	.68
11. Teaching materials promotes high expectations of learner's behaviour	.54	.54
12. Teaching materials provides equal opportunities to boys and girls	.67	.67
13. Teaching materials focus on expected behaviour, rather than the undesired behaviour	.62	.62
14. Teaching materials support learners with special education needs	.68	.68
15. Proportion of learners successfully complete task	.72	.72
16. Lesson materials are built on practical skills	.65	.65
17. Operationalization of career guidance activities boosts learning	.65	.65
18. Teaching materials encourages career	.67	.67
19. Teaching materials promotes learners to volunteer to participate in the lesson	.51	.51
20. Teaching materials facilitate learners' engagement during the lesson	.74	.74
21. Learners work collaboratively	.65	.65
22. Learners accept feedback from peers and teachers	.52	.52

The study adopted Watkins (2021) that factors with Eigen values (total variance) greater than 0.5 should be retained, while those below 0.49 should be removed from the analysis as they are not considered significant. From the results as shown in Table 17, under learning process, no statement was dropped since all statements had factor analysis values greater than 0.5. The results revealed that the statement "The school ensures that Teachers teach by asking open-ended questions" had the highest value of 0.80 indicating that the statement had a strong influence on the factor. Other statements such as "The school ensures that Teachers utilize strategies to determine and guide learners' level of understanding", "Teaching materials

facilitate learners' engagement during the lesson", and "The school provides up-to-date information relevant to the lesson being taught" had values of 0.75, 0.74, and 0.72 respectively.

4.5.5.3 Human Resource Development Interventions

The study examined HRDI as a moderator of the relationship between school leadership and academic performance. The study employed factor analysis to examine the HRDI variable, using SPSS version 27 for dimension reduction. The analysis initially considered the nineteen statements, but those with factor loading values below 0.5 were excluded because they were not considered significant. The resulting factor loading values for the HRDI variable are presented in Table 18, providing insight into the underlying structure of this construct.

Table 18: Factor Analysis of Human Resource Development Interventions

	Factor Loading	
	Before reduction	After reduction
1. I have completed my teacher license education	.33	-
2. I have completed the professional standards and ethics competence training	.61	.72
3. I have participated in school-based in-service training	.71	.69
4. I have participated in rank-based programmes	.51	.62
5. My teaching roles are checked by my supervisor	.55	.70
6. My classroom priorities are checked by my supervisor	.58	.64
7. My classroom teaching instructional practices have been reviewed	.58	.63
8. I received feedback on strengths in my teaching instructional practices	.46	-
9. I received feedback on weakness in my teaching instructional practices	.27	-
10. I get support for portfolio building	.66	.71
11. I obtained good score in annual performance appraisal	.51	.64
12. I have received support for CPD program	.90	.74
13. I have participated in PLC program	.52	.61
14. I have received support to attend external workshops	.63	.70
15. I have participated in job assignments on-the-job	.45	-
16. I constantly meet with school leaders and supervisor	.82	.77
17. I was assigned a supervisor on my first appointment	.69	.61
18. I get support from my supervisor in my professional work	.31	-
19. I have been on secondment at the same grade to another sch	.57	.61

The study adopted Watkins (2021) that factors with Eigen values (total variance) greater than 0.5 should be retained, while those below 0.49 should be removed from the analysis as they are not considered significant. From the results in Table 18, five statements were dropped since the factor analysis values were less than 0.5. As shown, the statements dropped included: “I have completed my teacher license education” (0.328); “I received feedback on strengths in my teaching instructional practices” (0.46); “I received feedback on weakness in my teaching instructional practices” (0.27); “I have participated in job assignments on-the-job” (0.45); and, “I get support from my supervisor in my professional work” (0.31). Consequently, fourteen items were utilized for further analysis.

The results, after the reduction, reveal that statements such as “I constantly meet with school leaders and supervisor”, “I have received support for CPD program”, and “I have completed the professional standards and ethics competence training” had values of 0.77, 0.74, and 0.72 respectively. These statements had strong associations with the factor determining the strength and direction of the human resource development intervention variable.

4.5.5.4 Academic Performance

The study examined academic performance as a dependent variable. The study conducted a factor analysis test on the fourteen statements if the academic performance variable. The test was conducted using version 27 of the SPSS’s dimension reduction. The study removed statements with a factor loading value of less than 0.5 because they were not considered significant. The test results of the factor loading of the academic performance variable are contained in Table 19.

Table 19: Factor Analysis of Academic Performance

	Factor Loading	
	Before reduction	After reduction
1. the school's WASSCE performance in the core subjects has been decreasing	.38	-
2. on average, students' end-of-term exam scores in core subjects have been poor	.27	-
3. on average, students' mock exam scores in core subjects have been poor	.34	-
4. Proportion of students successfully complete teachers' task during the lesson	.89	.71
5. students volunteer to participate in lesson tasks	.38	-
6. students accept feedback from peers and teacher and work with them	.61	.54
7. students ask questions during lesson	.66	.51
8. students are unable to balance their learning in the four core subjects	.68	.50
9. the school has not been recognised for students' academic performance	.61	.52
10. students are allowed to work and produce in a group	.72	.54
11. teachers discuss feedbacks with students to ensure students' understanding	.55	.61
12. students have good grades in group work and group presentation	.54	.71
13. students attendance to class has been poor	.36	-
14. students are rewarded for good grades	.27	-

The study adopted Watkins (2021) that factors with Eigenvalues (total variance) greater than 0.5 should be retained, while those below 0.49 should be removed from the analysis as they are not considered significant. From the results in Table 19, six statements were dropped since the factor analysis values were less than 0.5. As shown, the statements dropped included: "the school's WASSCE performance in the core subjects has been decreasing" (0.38); "on average, students' end-of-term exam scores in core subjects have been poor" (0.27); "on average, students' mock exam scores in core subjects have been poor" (0.34); "students volunteer to participate in lesson tasks" (0.38); "students' attendance to class has been poor" (0.36); and, "students are rewarded for good grades" (0.27). Therefore, eight items were utilized for further analysis.

The results, after the reduction, reveal that statements such as "Proportion of students successfully complete teachers' task during the lesson" and "students have good grades in group work and group presentations" had a value of 0.71 and had a strong association with the factor determining the strength and direction of academic performance variable.

4.6 Descriptive Statistics

The aim of conducting descriptive statistics was to effectively describe distributions of scores or measurements using indices or statistics. The descriptive is a form of organizing scores obtained for the various categories of a particular variable. The selection of statistics or indices is based on the variables and measurement scale used in the study. To understand the patterns in the data, the study conducted a descriptive analysis of school leadership, learning process, human resource development interventions, and academic performance.

4.6.1 Status of School Leadership

The study's initial aim was to establish how school leadership relates to academic performance in public senior high schools in Ghana. Descriptive statistics was conducted to observe the status of school leadership. The data distribution was assessed using skewness and kurtosis, while central tendency was assessed using mean, median, and mode. The measurement of dispersion was analysed through the standard deviation. The results of the test are detailed in Table 20.

Table 20: Descriptive Statistics of School Leadership

School Leadership		
N	Valid	1949
	Missing	0
Mean		3.8973
Std. Error of Mean		.01455
Median		4.1111
Mode		4.44
Std. Deviation		.64247
Skewness		-.855
Std. Error of Skewness		.055
Kurtosis		.073
Std. Error of Kurtosis		.111
Maximum		5.00

The descriptive statistics results for school leadership in Table 20 show a mean of 3.8973, a median value of 4.111, and a mode value of 4.44. The total number of respondents was 1949 in each case. The high mean suggests that the respondents were in agreement with the statements on school leadership and important. The test also shows a standard deviation of 0.64247. This value showed how the data does not deviate from the mean and the opinions coalesce.

Additionally, the test shows a skewness value of -0.855 (SE = 0.55). Bai and Ng's (2005) study found that a skewness value less than -1 or greater than 1 indicates a highly skewed distribution, while a skewness value between -1 and -0.5 or between 0.5 and 1 suggests a moderately skewed distribution. Furthermore, a skewness value between -0.5 and 0.5 indicates an approximately symmetric distribution. Since the test result of skewness value is found between -1 and -0.5, the study concludes that the distribution of school leadership is moderately skewed.

In probability distributions, kurtosis measures the "peakedness." A kurtosis value of 3 indicates a mesokurtic distribution (Kline, 2013). The increased kurtosis (>3) is characterized by a thin "bell" with a high peak, whereas a decreased kurtosis (<3) is characterized by a broadened peak and thickened tails. A leptokurtic kurtosis is greater than a value of 3, and a platykurtic one is less than a value of 3 (lepto means thin, platy means broad). The test shows a kurtosis value of 0.073(SE = 0.111). Thus, the study concludes that the school leadership shows platykurtic with a broad tail distribution. It does not show any outliers. The ratio of Kurtosis to its standard error was less than 2, which indicates that the distribution was approximately symmetric. Accordingly, school leadership was evenly distributed, and there was a small difference between the high and low scores.

4.6.2 Status of Learning Process

The second objective of the study was to determine the mediating effect of the learning process on the relationship between school leadership and the academic performance of public SHS in Ghana. The descriptive statistics were conducted to observe the status of the learning process. The data distribution was assessed using skewness and kurtosis, while central tendency was assessed using mean, median, and mode. The measurement of dispersion was analysed through the standard deviation. The results of the test are detailed in Table 21.

Table 21: Descriptive Statistics of Learning Process

Learning Process		
N	Valid	1949
	Missing	0
Mean		3.2543
Std. Error of Mean		.01162
Median		3.3182
Mode		3.64
Std. Deviation		.51297
Skewness		-.160
Std. Error of Skewness		.055
Kurtosis		-.463
Std. Error of Kurtosis		.111
Maximum		6.14

The descriptive statistics test of the learning process shows a mean value of 3.2543 with a standard deviation = 0.51297, a median value of 3.3182, and a mode value of 3.64. The total number of respondents in each test was 1949. The high mean suggests that the respondents were in agreement with the statements on the learning process and therefore it is important. The standard deviation shows that the data falls closer to the mean and the opinions coalesce.

The skewness value for the learning process was -0.160 (SE = 0.055). The skewness value falls between -0.5 and 0.5; therefore, according to (Bai & Ng, 2005), the data is approximately symmetric. The symmetric nature of the learning process is also indicated by the standard error of skewness, which was less than the value of 2. Additionally, the test results show a kurtosis value of -0.463 (SE = 0.111). The kurtosis showed that the data was platykurtic since the test value was less than 3. Thus, the data showed a broad tail distribution and no outliers. Accordingly, the learning process was evenly distributed, and there was a small difference between the high and low scores.

4.6.3 Status of Human Resource Development Interventions

Another objective of the study was to investigate the moderating effect of human resource development interventions on the relationship between school leadership and the academic performance of public SHS in Ghana. The status of human resource development interventions was observed by conducting descriptive statistics on the data. The data distribution was assessed

using skewness and kurtosis, while central tendency was assessed using mean, median, and mode. The measurement of dispersion was analysed through the standard deviation. The results of the test are detailed in Table 22.

Table 22: Descriptive Statistics of HRDI

Human Resource Development Interventions		
N	Valid	1949
	Missing	0
Mean		4.0910
Std. Error of Mean		.00653
Median		4.1333
Mode		4.13
Std. Deviation		.28813
Skewness		-1.123
Std. Error of Skewness		.055
Kurtosis		5.012
Std. Error of Kurtosis		.111
Maximum		5.00

The descriptive statistics test results for human resource development interventions in Table 22 show a mean of 4.0910, a median value of 4.1333, and a mode value of 4.13. The total number of respondents was 1949 in each test. The high mean suggests that the respondents were in agreement with the statements on human resource development interventions and the variable is important. The test also showed a standard deviation of 0.28813, which indicated that the data were very close to the mean and the opinions of the respondents coalesced.

The skewness value of the human resource development interventions data was -1.123, and a standard error of skewness value of 0.055. The study concludes that the data was skewed. However, the ratio of the skewness to its standard error indicated a value less than 2, which implied that the data was approximately normal distribution. The kurtosis test indicated a kurtosis value of 5.012 and a standard error of kurtosis of 1.111. The study concludes that the data was a leptokurtic kurtosis since the value was greater than a value of 3, and therefore, the data had a thin tail distribution. The ratio of kurtosis to its standard error was less than the value of 2 and this indicated that the distribution was approximately normal distribution. Human

resource development interventions were evenly distributed, and there was a small difference between the high and low scores.

4.6.4 Status of Academic Performance

Descriptive statistics was conducted to observe the status of the study's dependent variable, academic performance. The data distribution was assessed using skewness and kurtosis, while central tendency was assessed using mean, median, and mode. The standard deviation measured the dispersion of the data. The results of the test are detailed in Table 23.

Table 23: Descriptive Statistics of Academic Performance

Academic Performance		
N	Valid	1949
	Missing	0
Mean		3.6624
Std. Error of Mean		.01528
Median		3.7500
Mode		4.38
Std. Deviation		.67445
Skewness		-.305
Std. Error of Skewness		.055
Kurtosis		.074
Std. Error of Kurtosis		.111
Maximum		8.00

The results in Table 23 show a mean value of 3.6624 (SD = 0.67445), a median value of 3.7500, and a mode value of 4.38. The total number of respondents was 1949 in each test. The high mean suggests that the respondents were in agreement with the statements on academic performance and the variable is important. The test also showed a standard deviation of 0.67445, which indicated that the data were very close to the mean and the opinions of the respondents coalesced.

Additionally, the results from the Table 23 show a skewness value of -0.305 (SE = 0.055). The test results indicated that the distribution was approximately symmetric since the skewness value was between -0.5 and 0.5. The ratio of the skewness to its standard error indicated a value less than 2, which implied that the data was approximately normal distribution. The test for

kurtosis showed a value of 0.074 (SE = 1.111). The kurtosis showed that the data was platykurtic since the test value was less than 3. Thus, the data showed a broad tail distribution and no outliers. Accordingly, the academic performance was evenly distributed, and there was a small difference between the high and low scores.

4.7 Correlation Test

The study sought to investigate the relationship between the study variables. A correlation analysis is a test that shows the association between the independent and dependent variables. To examine the connection between the study's independent and dependent variables, a Pearson correlation analysis was conducted using the SPSS software. The correlations were tested at a 0.01 significance level with two asterisks (**). To determine statistical significance, the p-value of the chosen significance level is observed. The p-value shows whether the correlation coefficient is significantly different from zero. The rule is that if the p-value is less than or equal to 0.05, the correlation is statistically significant. However, the correlation is not statistically significant if the p-value is greater than 0.05 or the chosen significance level. The correlation test results can be found in Table 24.

Table 24: Correlation Test

		School Leadership	Learning Process	Human Resource Development Interventions	Academic Performance
School Leadership	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	1949			
Learning Process	Pearson Correlation	.384**	1		
	Sig. (2-tailed)	.000			
	N	1949	1949		
Human Resource Development Interventions	Pearson Correlation	.180**	.108**	1	
	Sig. (2-tailed)	.000	.000		
	N	1949	1949	1949	
Academic Performance	Pearson Correlation	.637**	.730**	.178**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	1949	1949	1949	1949

**. Correlation is significant at the 0.01 level (2-tailed).

The correlation test results in Table 24 show a significant positive association between school leadership and academic performance (r=0.637, p=0.000). The degree of the association between school leadership and academic performance is strong. This implies that school leadership is positively associated with academic performance, and therefore, where school leadership are promoted, it leads to achievement in academic performance. The results tend to agree with Amakyi (2022), who found that school leadership establishes the school's purpose (vision and aims), the culture of learning, and values and monitors their implementation and in the absence of school leadership, the school is challenged.

The results also show a significant positive association between the learning process and academic performance (r=0.730, p=0.000). The results indicated the degree of the association between the learning process and academic performance is strong. The results further show that

human resource development interventions were positively and significantly associated with academic performance (r=0.178, p = 0.000). However, the degree of the association between human resource development interventions and academic performance is low. These results indicated that school leadership, the learning process, and human resource development interventions depicted positive connections with academic performance. The relationships existing among the study variables project the further testing of the variables.

4.8 Hypotheses Testing and Discussions

In this section, the study's test results for the hypotheses are presented. The hypotheses explored the relationships between the variables in the study as outlined in the conceptual model. The study's focus was on four objectives, each supported by a corresponding hypothesis. These hypotheses were designed to assess the influence of school leadership (independent variable) on academic performance (dependent variable), the moderating effect of human resource development interventions on the relationship between school leadership and academic performance, the mediating effect of learning process on the relationship between school leadership and academic performance, and the combined moderating and mediating effect of human resource development interventions and learning process on the relationship between school leadership and academic performance of public senior high schools in Ghana.

Four hypothesis tests using different regression models and approaches were conducted. The first hypothesis test was conducted using a simple linear regression model, while the second and third hypotheses for mediation and moderation models were tested using a stepwise approach as recommended by Baron and Kenny (2004). Finally, the fourth hypothesis was tested using stepwise simple regression models, with the final step being a multiple regression model. The study sets the significance levels at 5% ($\alpha = 0.05$) for all tests, and the evaluation focused on the study's objectives. From the test results, analysis and discussions on findings are made.

4.8.1 School Leadership and Academic Performance

The first objective of the study was to examine the relationship between school leadership and the academic performance of public SHS in Ghana. To measure this objective, a linear regression model test was conducted using SPSS. The indicators for interpreting and making a decision on the hypothesis were the R-square (R^2) and the Analysis of Variance (ANOVA). The R-square is the coefficient of determination of the variations in the dependent variable as a result

of the influence of the independent variable. The ANOVA involves calculations that offer insight into the variability levels within a regression model, and it serves as the foundation for conducting significance tests. The testing null hypothesis was:

H_{01}: There is no significant relationship between school leadership and academic performance in public SHS in Ghana.

To test the hypothesis, the study adopted the regression model equation:

$$AP = ß_0 + ß_1 SL + è$$

Where, AP = Academic Performance of public senior high schools (Dependent variable); SL = School Leadership (Independent variable); $ß_0$ = Constant; $ß_1$ = Regression Coefficient; and è = Error term.

The statistical significance of the hypothesis was evaluated using simple linear regression, which produced regression coefficients, the coefficient of determinations (R^2), and analysis of variance (ANOVA) alongside model coefficients. The rule was that the R^2 Coefficient of 1 indicated perfect predictability of the model, P-value ≤0.05 shows a significant correlation between the variables, and ANOVA F-test with p-value ≤0.05 shows that the model has the predictive ability. The tests were conducted using the mean scores of the study variables. The results of the tests are presented in Tables 25, 26, and 27.

Table 25: Model Summary of School Leadership

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.637[a]	.406	.406	.51995

a. Predictors: (Constant), School Leadership

The model summary results in Table 25 indicate that the association between school leadership and academic performance is strong and positive (r = 0.637, p = 0.000). Also, the results show that R^2 = 0.406. Since R^2 is less than 1, it implies that the model was accurate in its predictability of the influence of the independent variable (school leadership) on academic performance of public senior high schools in Ghana. The model indicated that about 40.6% of academic

performance outputs result from the influence of school leadership. This means that school leadership explains 40.6% of the differences in academic performance.

Table 26: ANOVA of School Leadership

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	359.765	1	359.765	1330.771	.000[b]
	Residual	526.358	1947	.270		
	Total	886.123	1948			

a. Dependent Variable: Academic Performance

b. Predictors: (Constant), School Leadership

Another indicator to determine the statistical relationship between school leadership and academic performance is the ANOVA F-Test results in Table 26. From Table 26, F-statistics value = 1330.771, p = 0.000. The results indicate that the regression model of academic performance on school leadership was significant and has predictive ability.

Table 27: School Leadership and Academic Performance

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients		
	Model	B	Std. Error	Beta	t	Sig.
1	(Constant)	1.056	.072		14.574	.000
	School Leadership	.669	.018	.637	36.480	.000

a. Dependent Variable: Academic Performance

Following the results of the ANOVA test, the coefficient test of the variables was conducted. Table 27 shows the results of the coefficient test of the school leadership (0.669, p = 0.00) was significant. The relationship between school leadership and academic performance is positive. Accordingly, the coefficient of school leadership is assumed from the regression coefficient results in Table 27. The fitted model from the test results is presented as:

$$\mathbf{AP = 1.056 + 0.669SL}$$

The results indicate that a unit change in school leadership will increase academic performance by 0.669 or 66.9%, and since the p-value of 0.000 is less than the critical value of 0.05, it is significant. The null hypothesis for testing was “there is no significant relationship between school leadership and academic performance in public SHS in Ghana”. The study does not accept the null hypothesis and concludes that there is a significant relationship between school leadership and academic performance in public senior high schools in Ghana.

School leadership’s effect on academic performance was evaluated based on the dimensions of the ability to set a clear and inspiring school vision, effective leadership for teaching and learning, capacity to improve the school, and productive relationships between parents, the school management committee, and parent-teacher associations. Other indicators of school leadership included the supervisory abilities of school leadership, the ability to conduct formative evaluation, and the school leadership’s possession of requisite knowledge and skills. The study found that the indicators having strong associations with the factor and determining the strength and direction of school leadership included "The school has a strategic plan to support teaching and learning" and "The school board does not interfere with the work of headteachers". These school leadership evaluators were further evaluated against the indicators of academic performance to test the hypothesis and determine the significant effect of school leadership on academic performance. The findings showed that where school leadership is held constant, academic performance will be achieved at 1.056. A unit increase in school leadership will cause an increase in academic performance by 0.669 (p=0.000). This indicated that school leadership was significantly associated with academic performance. Practically, the results show that school leadership is able to improve academic performance by 66.9%. It can be concluded that achievements in the academic performance of students in public senior high schools are attributed to effective and efficient school leadership.

The findings in this study are supported by previous studies on the relationship between school leadership and academic performance. For instance, the results were consistent with Huaisheng et al. (2019), who examined how school leadership affected the academic performance of Public SHS students in Ghana and found a positive relationship. Huaisheng et al. (2019) also found that functions supervision of students’ and teachers’ input, PTA support, and monitoring and evaluation of teaching and learning public SHS to enhance students’ academic performance. The findings were also consistent with Awiah (2018), who argued that the school management

committee/Board and principal management of SHS are vested in the GES and had a positive effect on the performance of the schools. However, other researchers, such as Salifu (2014), had a different view concerning the relationship between school leadership and academic performance. According to Salifu (2014), school leadership was the cause of failures in the performance of schools. Cruickshank (2017) concluded that school improvement could take several years to become evident.

The findings were also consistent with Huguet (2017), who found positive impacts of school leadership strategies on academic performance. It also agrees with Cruickshank (2017), who found that there existed a positive relationship between school leadership and student outcomes. The findings of this study were also supported by Heystek and Emekako (2020), who conducted a study on leadership and motivation for improved academic performance in schools. The findings also agree with the study conducted by Atteh et al. (2020), which found a positive correlation between the perceived competencies of school leadership and outcomes in the realm of teaching and learning. The results are in line with Ochieng's (2023) results, which found a positive significant impact of principals' management practices on academic performance in public secondary schools in Kenya.

The findings also agree with those of Kitur et al. (2020), who studied the relationship between school leadership styles and academic performance in secondary schools in Kenya and found a strong significant relationship. This is supported by Asumadu (2019), who emphasized the need to equip school leadership with skills and resources as it enhanced student performance in the increased access to secondary education in Ghana. In the study, Asumadu (2019), found school boards to be pivotal in three functions: establishing a clear vision and culture, allocating tasks, and implementing financial management practices for enhanced financial stewardship. The findings in Asumadu (2019) are aligned with the evaluations of school leadership in the present study. Additionally, the findings are consistent with Pourrajab et al. (2016), who conducted a study on the relationship between principal leadership styles and students' academic achievement and postulated four-frame leadership models and found that human resource development impacted the relationship between principals' leadership styles and students' academic achievement.

The results also agree with Tan (2018), who examined the school leadership effects on student academic achievements and found school leadership effects accounted for a greater proportion of between-school achievements between different categories of students. The findings of the present study are inconsistent with Luschei et al. (2021), who examined school governance and student academic achievements and found no relationship. Their study suggested that where school leadership styles are controlled, there is no fundamental change in decision-making and student academic achievements. The study postulated that the impact of teachers teaching in the classroom, which impacts students' achievements, was independent of school leadership. Consequently, the present study found implications to practice, as school leadership may find new techniques for managing teachers.

The results are in line with Owan et al. (2018), who investigated the association between school management and secondary school students' academic performance and found a positive relationship. The study revealed that, among other things, disciplinary control, classroom management, and teacher motivation caused the relationship between school management and academic performance to be high. The results are consistent with Kapur (2018), who investigated the factors influencing students' academic performance in secondary schools in India and found school leadership. The results disagree with Akyeampong et al. (2015), who argued that the performance of school leadership created by the Government has not been as expected due to inadequate funding, staff shortfalls, weak enforcement powers, and the lack of clear accountability framework leading to the poor academic performance of students. The findings paved the way for further studies in the area.

Consequently, the findings postulated implications for theory, policy and practice, especially in the selection of school leadership. The results show unit increase in school leadership will cause an increase in academic performance. Therefore, the appointment of school leadership must be considered as a priority. According to Wilkinson and Long (2019), the role of school leadership is to foster equal access to quality education at the secondary level, and therefore, certain attributes should be considered before the appointment. Asumadu (2019) emphasized the need for equipping school leadership for their role. Heystek and Emekako (2020) suggested extra classes, teaching collaboration, and monitoring and team building as attributes to be adopted by school leadership to improve academic performance.

4.8.2 The moderating role of Human Resource Development Interventions on the relationship between School Leadership and Academic Performance.

The study's objective two was to investigate the moderating effect of HRDI on the relationship between school leadership and academic performance of public SHS in Ghana. The testing null hypothesis was:

H_{02}: HRDI does not significantly moderate the relationship between school leadership and academic performance in public SHS in Ghana.

To conduct this test in SPSS using the Baron and Kenny method, three regression models were used. The models were presented as:

i. Model 1: $AP = 1.056 + 0.669SL$
ii. Model 2: $AP = ß_2 + ß_3\ SL + ß_4\ H + è$
iii. Model 3: $AP = ß_5 + ß_6\ SL + ß_7\ H + ß_8\ SL*H + è$

Where, AP = Academic Performance of public senior high schools (Dependent variable), SL = School Leadership (Independent variable), and H = HRDI (the moderator). The first model shows the prediction of academic performance against school leadership. In the second model, school leadership and HRDI were predicted against academic performance. Finally, in the third model, academic performance was regressed against school leadership, HRDI and the interaction term of school leadership and HRDI (SL*H). The tests were conducted using the mean scores of the study variables. The results of the tests are presented in Table 28.

Table 28: Regression Model of School Leadership and HRDI

Variable	Model 1 $AP = ß_0 + ß_1 SL + è$	Model 2 $AP = ß_2 + ß_3 SL + ß_4 H + è$	Model 3 $AP = ß_5 + ß_6 SL + ß_7 H + ß_8 SL*H + è$
School Leadership	0.669 (0.000)	0.656 (0.000)	-0.518 (0.043)
Human Resource Development Interventions	-	0.154 (0.000)	-0.960 (0.000)
SL*H	-	-	0.289 (0.000)
Constant	1.056 (0.000)	0.474 (0.006)	4.990
R-Squared	0.406	0.410	0.417
F-Statistic	1330.771	676.680	462.883
Sig.	0.000	0.000	0.000

The results show that there are significant levels in model 1, model 2, and model 3 of the test. From the Table 28, the results indicated are:

Model 1: AP = 1.056 + 0.669SL

From the model one testing, the ANOVA F-Test results are F-statistics value = 1330.771, p=0.000. The test showed a significant level with an $R^2 = 0.406$.

Model 2: AP = 0.474+0.656SL+0.154H

From the model two testing, the ANOVA F-Test results are F-statistics value = 676.680, p=0.000. The test showed a significant level with an $R^2 = 0.410$.

Model 3: AP = 4.990 – 0.518SL – 0.960H + 0.289SL*H

From the model three, the ANOVA F-Test results are F-statistics = 462.883, p = 0.000. The test showed a significant level with an $R^2 = 0.417$.

Subsequently, the fitted models are:

Model 1: AP = 1.056 + 0.669SL

Model 2: AP = 0.474+0.656SL+0.154H

Model 3: AP = 4.990 – 0.518SL – 0.960H + 0.289SL*H

To determine whether or not HRDI significantly moderate the relationship between school leadership and academic performance, the p-value of the interaction between school leadership and HRDI was assessed. Since the p-value of the interaction between school leadership and HRDI (SL*H) is 0.000, the study concluded that HRDI moderates the relationship between school leadership and academic performance. Again, from the test in Table, R^2 of the interaction between school leadership and HRDI (SL*H) is 0.417. The R^2 increased from 0.410 before moderation to 0.417 after moderation. The null hypothesis for the testing was that HRDI does not significantly moderate the relationship between school leadership and academic performance in public SHS in Ghana. Therefore, the study does not accept the null hypothesis and concludes that HRDI significantly moderates the relationship between school leadership and academic performance in public senior high schools in Ghana.

The study results revealed that human resource development interventions significantly moderate the relationship between school leadership and academic performance in public secondary schools in Ghana. Human resource development interventions were evaluated using elements such as technical training, instructional supervision, support for professional development, and coaching. The study found that HRDI indicators such as “I constantly meet with school leaders and supervisor”, “I have received support for CPD program”, and “I have had strong associations with the factor determining the strength and direction of human resource development intervention variable. The HRDI evaluators were further evaluated against the indicators of school leadership and academic performance to test the hypothesis and determine the significant moderating effect of HRDI on the relationship between school leadership and academic performance. The results on the relationship between school leadership and academic performance found a significant positive relationship. The results indicated that school leadership is held constant, and academic performance will be achieved at 1.056. A unit increase in school leadership will cause an increase in academic performance by 0.669 (p=0.000). The study adopted three models to test the moderating effect of HRDI on the relationship between school leadership and academic performance.

The first model's results indicated that the regression model of academic performance on school leadership was significant. Model two’s results also depicted that the regression model of academic performance on school leadership and HRDI was significant. In the third model,

academic performance was regressed on school leadership and HRDI and the interaction term of school leadership and HRDI (SL*H). The results were significant (F-statistics = 462.883, p=0.000, R^2=0.417), and the results postulated that HRDI moderates the relationship between school leadership and academic performance. Previous studies support the findings of the present study. For instance, the findings are in line with Abonyi (2017), who identified human resource development interventions as plausible moderating variables in the efforts of school leadership to enhance academic performance in secondary schools. His assertion aligns with the research perspective emphasizing that the primary aim of human resource development is to enhance individual performance, underscoring that unless the acquired knowledge is effectively transferred back to the workplace, its value to the institution remains limited. The researcher suggested that aspects of HRDI like technical training, supervision of instruction, support for professional training and coaching were found to improve the ability of a school's human resources to work better to cause improved performance (Abonyi, 2017).

The findings are consistent with Grissom et al. (2021), who conducted a comprehensive study on the impact of school leadership on student outcomes and found that effective school leadership is positively correlated with student achievement and learning growth, principals' leadership behaviours, such as setting goals and expectations, facilitating collaboration, and providing support, are key predictors of student success, school leaders play a critical role in fostering a positive school climate, which in turn affects student motivation, engagement, and academic performance. The study highlights the importance of principal training and development programs that focus on building leadership skills to improve student outcomes. The study provides evidence that school leadership is a crucial factor in shaping student success and emphasizes the need for targeted investments in leadership development to enhance student learning and achievement. The study findings postulated implications for practice and policy.

The findings are also in line with those of Agbodeka et al. (2019), who found that human resource development moderates school leadership capacity and academic performance. Agbodeka et al. (2019) suggested technical training for school leadership to involve themselves in student guidance to enhance capacity and create an efficient career guidance process for academic performance. The results also align with Upoalkpajor (2020), who argued that learning process influence the impact of school leadership on student's ability to achieve academic success. However, Manu et al. (2020) posited that the achievement of the school

improvement objectives, such as improved academic performance, is contingent upon establishing a harmonious relationship among the five external forces: parents and community, technology, stakeholders, government policy, and the teaching council. The five external forces identified provided suggestions for effective school leadership practice in schools.

The findings are also in line with those of Mylona and Mihail (2022), who underscored the recurrent theme of supportiveness in employee development and found that the leader's degree of assistance and support significantly influences the leadership impact on students' academic performance. The results are sustained by those of Mutuku et al. (2021), who conducted a study on the moderating effect of school infrastructure on the relationship between human resource management practices and the academic performance of secondary schools in Kenya and found that training and development moderated the effects of proper decision-making in the secondary school on the student's academic performance. The findings are also supported by Bryson et al. (2023), who found that better recruitment strategies and training have an intense influence on the management of schools and academic performance.

In addition, the results agree with Swanson (2022), whose work intimated human resource development initiatives enhance the impact of leadership and outcomes, focusing on building knowledge and skills, enhancing leadership and management principles, fostering a culture of continuous improvement, and aligning the human resource development initiatives to the organizational goals. The suggestions of Swanson (2022) are supported by Coe et al. (2014). However, Coe et al. (2014) further posited that the development of teachers affected the relationship between the principal's function on student learning and academic performance. These additional stands of Coe et al. (2014) are aligned with the findings of the current study. The findings do not agree with Awiah (2018), who posited that student accommodation was the main factor that moderated the effect of leadership and academic performance amidst the introduction of new reforms and new human resource development techniques. He argued that the overcrowding in schools, accommodation issues for day and boarding students, rented accommodation implications for students, inadequate toilet facilities and sexual abuse of students affected the achievements of academic performance. He further suggested that the system of training implemented in schools should facilitate periodic reviews and/or revision of the mission statement of the school to result in improved services and student performance.

The findings are consistent with those of Smith and Smith (2015), who found a positive correlation between headteacher supervision, headteacher functions, and student academic performance. The researchers argued that feedback from headteachers' superiors' supervision was a hallmark of school leadership in high-performing schools. The results are also in line with those of Amina (2015), who found that observing classroom teaching and learning activities positively impacts the relationship between the head teacher's conduct and high academic performance. The findings of the current study do not agree with those of Manu et al. (2020), who indicated that an effective reform to improve the learning process and academic performance of secondary education must be supported by five external forces: parents and community, technology, stakeholders, government policy, and the teaching council. Manu et al. (2020) posited that the achievement of the school improvement objective is contingent upon establishing a harmonious relationship among the five external forces. The results of the current study indicated that human resource development interventions moderated the relationship between school leadership and academic performance.

The significant positive results are consistent with those of Bush and Glover (2017), who found that aspects of human resource development interventions that focus on leadership development, teacher training, and capacity building positively impact the relationship between school leadership and academic performance. The findings are also consistent with those of Sultana (2018), who found that human resource development practices that emphasized teacher professional development, leadership capacity building, and organizational learning have a significant effect on student outcomes and school effectiveness. The findings are also in line with Ukozor (2024), who also found that human resource development interventions have a positive impact on school leadership effectiveness and student academic performance.

The findings agree with those of Ankoma-Sey and Maina (2016), who conducted a study on the role of effective supervision on the academic performance of senior high schools in Ghana and found that the absence of headteachers' supervision functions causes a positive weak relationship between the headteacher's function and academic performance. The findings are also in consistent with that of Hervie and Winful (2018), who found that training and development moderated the relationship between teacher performance and students' academic achievements. What this means is that school leadership could focus on the training and development of headteachers and teachers to improve the academic performance of students.

The study implied that school leadership was an important resource in schools, however, its effectiveness was on the application of skills and knowledge acquired or to be acquired. Therefore, school leadership should prioritize the acquisition of skills and knowledge for pedagogical teaching and learning.

4.8.3 The mediating role of Learning Process on the relationship between School Leadership and Academic Performance.

The study's objective three was to investigate the mediating effect of learning process on the relationship between school leadership and academic performance of public SHS in Ghana. The testing null hypothesis was:

H_{03}: Learning process does not significantly mediate the relationship between school leadership and academic performance in public SHS in Ghana.

To conduct this test in SPSS using the Baron and Kenny method, four regression models were used. The models were presented as:

i. Model 1: $AP = ß_0 + ß_1 SL + è$
ii. Model 2: $L = ß_0 + ß_1 SL + è$
iii. Model 3: $AP = ß_9 + ß_{10} L + è$
iv. Model 4: $AP = ß_{12} + ß_{13} SL + ß_{14} L + è$

Where, AP = Academic Performance of public senior high schools (Dependent variable), SL = School Leadership (Independent variable), and L = Learning process (the mediator). The first model shows the prediction of academic performance against school leadership. In the second model, the direct effect of school leadership on the learning process was estimated. Learning process were predicted against academic performance in the third model. Finally, in the fourth model, academic performance was regressed against school leadership and learning process. The tests were conducted using the mean scores of the study variables. The results of the tests are presented in Table 29.

Table 29: Regression model of School Leadership and Learning Process

Variable	**Model 1** $AP = ß_0 + ß_1 SL + è$	**Model 2** $L = ß_0 + ß_1 SL + è$	**Model 3** $AP = ß_9 + ß_{10} L + è$	**Model 4** $AP = ß_{12} + ß_{13} SL + ß_{14} L + è$
Academic Performance	0.669 (0.000)		0.960 (0.000)	SL: 0.440 (0.000) L: 0.749 (0.000)
Learning Process	-	0.306(0.000)	-	-
Constant	1.056	2.061	0.539	- 0.487
R-squared	0.406	0.147	0.533	0.683
F-Statistics	1330.771	335.970	2221.867	2091.656
Sig.	0.000	0.000	0.000	0.000

The results show that there are significant levels in model 1, model 2, model 3, and model 4 of the test. From the Table 29, the results indicated are:

Model 1: AP = 1.056 + 0.669SL

The ANOVA F-Test results are F-statistics value = 1330.771, p = 0.000. The test showed a significant level with an $R^2 = 0.406$.

Model 2: L = 2.061 + 0.306SL

The ANOVA F-Test results are F-statistics value = 335.970, p=0.000. The test showed a significant level with an $R^2 = 0.147$

Model 3: AP = 0.539 + 0.960 L

The ANOVA F-Test results are F-statistics value = 2221.867, p = 0.000. The test showed a significant level with an $R^2 = 0.533$.

Model 4: AP = - 0.487 + 0.440SL + 0.749L

The ANOVA F-Test results are F-statistics value = 2091.656, p = 0.000. The test showed a significant level with an $R^2 = 0.683$.

The purpose of Models 1-3 was to establish the presence of direct associations among the variables in the study. Furthermore, if one or more variables are found to be non-significant, it suggests that mediation is unlikely. Assuming significant relationships are present in Models 1-3, conclusions can be drawn from Model 4. In Model 4, mediation is considered supported if the impact of the learning process remains significant after accounting for school leadership. If school leadership becomes insignificant when the learning process is controlled, it indicates full mediation. However, if school leadership remains significant, it supports partial mediation. The fitted models from the test are:

Model 1: AP = 1.056 + 0.669SL

Model 2: L = 2.061 + 0.306SL

Model 3: AP = 0.539 + 0.960 L

Model 4: AP = - 0.487 + 0.440SL + 0.749L

The test results show that in Models 1-3, the p-value was less than 0.05 and therefore significant. The p-value in Model 4 was also less than the critical value of 0.05. The test results showed that all the models were significant. This implies that there is an existence of partial mediation, though the effect of the independent variable on the dependent variable is not significant in the presence of the mediator when its value is above zero, the presence of a full mediation of learning process in the relationship between school leadership and academic performance can still be inferred. The null hypothesis for the testing was learning process does not significantly mediate the relationship between school leadership and academic performance in public SHS in Ghana. The study does not accept the null hypothesis. The study concluded that learning process fully mediated the relationship between school leadership and academic performance. This implied that the presence of learning process in the schools causes the changes in academic performance where school leadership remains constant. The study also found that some indicators of learning process such as “The school ensures that Teachers teach by asking open-ended questions”, “The school ensures that Teachers utilize strategies to determine and guide learners’ level of understanding”, “Teaching materials facilitate learners' engagement during the lesson”, and “The school provides up-to-date information relevant to the lesson being taught” had strong associations with the factor and determined the strength and direction of the learning process variable.

The influence of learning as a mediator on the relationship between school leadership and academic performance was analyzed in four models in the current study. Previous studies are consistent with the findings of the current study. For instance, the findings are consistent with those of Usman and Madudili (2019) who found that learning process had a mediating effect on the relationship between principal's functions and academic performance in Nigeria. The findings of their study indicated that the achievement of students' academic success is contingent upon the conducive learning environments fostered by school leadership. The results of the current study are also in line with Runhaar et al. (2019), who found learning process to affect the relationship between teacher career roles and student academic performance. Also, the results corroborate the findings of Biruh (2018), who found that active learning mediated the positive correlation between leadership and academic performance. The study posited that though active learning was beneficial the practices of active learning in educational institutions are low because of inadequate funds, a higher number of students per class, the perception of teachers about active learning, and lack of training on active learning to school leaders.

In addition, the findings are consistent with Gannouni et al. (2018) who conducted a study on leadership and students' academic success and found that self-determination in the learning process mediates leadership and students' academic success. The study revealed a full mediation of learning determination through study autonomy between school leadership and intention to achieve. The findings also agree with Ferreira et al. (2019), who found that the pedagogical learning process mediated the relationship between school leadership and student success. He argued that pedagogical processes promoted by school leadership within the school might either hinder or promote learning. Also, the findings confirm those of Alexander (2017), who found that the learning process mediates the relationship between leadership provisions and student academic performance. Alexander (2017) concluded that students attend school to receive the opportunity to learn and the learning when provided effectively enhances academic performance.

The findings are also consistent with those of Kwame and Samuel (2020) who found that cooperative learning mediated the positive relationship between school leaders' function and academic performance. They argue that Ghanaian students perform better when they use a cooperative learning instructional strategy. Their study highlighted that school leadership affects the learning process by creating a supportive learning environment, encouraging teacher

collaboration and professional development, fostering a culture of innovation and experimentation, and providing resources and support for student learning. They further explained that the cooperative learning process affected academic performance by enhancing student engagement and motivation, improving teacher effectiveness and instructional quality, promoting deeper understanding and critical thinking, and encouraging cooperative learning and student participation. These are further confirmed by (Domingo & Garganté, 2016) that Students perceive the various tools and processes such as cooperative learning to enhance learning opportunities and achieve academic goals.

Furthermore, the findings are in line with those of Wang et al. (2023), who conducted a study on the mediating role of classroom learning climate in the relationship between teacher leadership style and student academic motivation and found that classroom learning climate significantly mediated the association between teacher leadership style and academic motivation. The findings are also in line with those of Wu et al. (2020), who found there were significant indirect effects of learning engagement on the relationship between leadership style motivations and academic performance. The significant effects found in the current study are also in line with Kılınç et al. (2024) who found an indirect effect of distributed leadership style on student achievements through teacher-student classroom relationship. Supervis et al. (2020) found self-efficacy learning practices to play a mediating role between leadership resilience and academic performance among adolescent students. The results of the current study are in line with those of Shuja et al. (2019), who highlighted that there existed a mediating role of facilitating strategies (learning approaches) in the relationship between leadership strategies (m-learning) and students' academic performance.

However, the findings are inconsistent with those of Byrne (2016) who found that the implementation of a diversity of explicit student-centred instructional strategies for student learning, which integrate inquiry-based hands-on activities impacted the relationship between school leadership functions and academic performance. Also, the findings are inconsistent with those of Valadas et al. (2017), who examined the mediating effect of learning styles on students' academic performance and headteacher roles and found that perceived academic success among students can be explained using previous academic success, course satisfaction, students' approach to learning, and study time. The findings disagree with those of Johnson and Johnson (2018), who did not represent the learning process as a mediator between leadership and

academic performance but delineated five crucial elements for effective learning: positive interdependence, face-to-face promotive interaction, individual accountability, interpersonal and small group skills, and group processing. The study presented that the five elements were the determinants of student academic performance.

The study findings are also inconsistent with those of Diaz et al. (2024), who conducted a study on the mediating role of learning on school approaches and academic achievements and found that most learning indicators do not mediate the relationship between the school approach and course performance. School approaches are the responsibility of school leadership to ensure that the school functions efficiently and effectively. The findings paved the way for further studies in the area. The findings of Diaz et al. (2024) are supported by Domenech-Betoret et al. (2017), who highlighted that students' expectancy-value beliefs mediated the relationship between academic approaches and student achievements. The present study findings are also in line with those of Loan and Van (2015). According to Loan and Van (2015), career orientation served as a mediator in the relationship between leadership strategic solutions and academic achievements of secondary schools.

4.8.4 School Leadership, Learning process, Human Resource Development Interventions and Academic Performance.

In the final objective, the study sought to examine the moderated-mediation effect of HRDI and learning process on the relationship between school leadership and academic performance of public SHS in Ghana. The testing null hypothesis was:

> **H_{04}: There is no significant moderated-mediation effect of HRDI and learning process on the relationship between school leadership and academic performance in public SHS in Ghana.**

The hypothesis was analyzed using the two models. The first model analyses school leadership with the moderator and the interaction term of the school leadership and human resource development interventions. This approach prioritizes analyzing the moderation effect before examining the mediation. The second model analyses school leadership on academic performance with the mediator. The models are presented as:

Model 1: $AP = ß_{16} + ß_{17} SL + ß_{18} H + ß_{19} SL * H + è$

Model 2: $AP = ß_{20} + ß_{21} SL + ß_{22} L + è$

Where, AP = Academic Performance of public senior high schools, SL = School Leadership, H = HRDI, L = Learning process, and SL*H = the interaction term of school leadership and human resource development interventions.

The rule was that if the null of 0.000 does not fall in between the lower boundary (BootLLCI) and the upper boundary (BootULCI) of the 95% confidence interval, we infer that the indirect effect is conditional on the level of the moderator variable thus showing that the intervening variable is significantly related to the dependent. Assuming that the model result of the interaction term of the first model is significant and the second model is significant too, then there is moderated-meditation. The indicators for interpreting and making a decision on the hypothesis were the R-square (R^2) and the Analysis of Variance (ANOVA). The R-square is the coefficient of determination of the variations in the dependent variable as a result of the influence of the independent variable. The ANOVA involves calculations that offer insight into the variability levels within a regression model, and it serves as the foundation for conducting significance tests. The results of the test are presented in Table 30.

Table 30: Regression model of moderated-mediation

Variable	Model 1 $AP = ß_{16} + ß_{17} SL + ß_{18} H + ß_{19} SL*H + è$	Model 2 $AP = ß_{20} + ß_{21} SL + ß_{22} L + è$
School Leadership	-0.518 (0.043)	SL: 0.440 (0.000) L: 0.749 (0.000)
Human Resource Development Interventions	-0.960 (0.000)	-
SL*H	0.289 (0.000)	
Constant	4.990	- 0.487
R-Squared	0.417	0.683
F-Statistic	462.883	2091.656
Sig.	0.000	0.000

The results from Table 30 show that there are significant levels in model 1 and model 2. From the Table 30, the results indicated are:

$$\text{Model 1: } AP = 4.990 - 0.518SL - 0.960H + 0.289SL*H$$

The ANOVA F-Test results are F-statistics value = 462.883, p = 0.000. The test showed a significant level with an $R^2 = 0.417$.

$$\text{Model 2: } AP = -0.487 + 0.440SL + 0.749L$$

The ANOVA F-Test results are F-statistics value = 2091.656, p = 0.000. The test showed a significant level with an $R^2 = 0.683$.

The purpose of Model 1 was to establish the moderation effect of human resource development interventions on the relationship between school leadership and academic performance before testing for the mediation effect of learning process in Model 2. The fitted models from the test are:

Model 1: $AP = 4.990 - 0.518SL - 0.960H + 0.289SL*H$

Model 2: $AP = -0.487 + 0.440SL + 0.749L$

The test results show that the p-values in both Models 1 and 2 were less than 0.05 and therefore significant. This implies that there is an existence of mediated moderation in the model. The null hypothesis for the testing was that there is no significant moderated-mediation effect of HRDI and learning process on the relationship between school leadership and academic performance in public SHS in Ghana. The study does not accept the null hypothesis. Therefore, there is a significant moderated-mediation effect of human resource development interventions and learning process on the relationship between school leadership and academic performance in public SHS in Ghana. Consequently, a resultant moderated-mediation effect emerges when HRDI moderates the mediated impact of the learning process on the academic performance of Senior High Schools (SHS). The study found that the relationship between school leadership and academic performance is mediated by learning process, however, the learning process is effective where there are effective human resource development interventions.

The study's objective was to examine the moderated-mediation effect of HRDI and learning process on the relationship between school leadership and academic performance of public SHS in Ghana. The testing null hypothesis was there is no significant moderated-mediation effect of HRDI and learning process on the relationship between school leadership and academic performance in public SHS in Ghana**.** The findings reveal the importance of human resource development interventions and learning process in the pedagogical setting of the school. Students need to be taught by effective and qualified teachers in an efficient manner and of conducive learning environment. The efforts of school leadership in setting a clear and inspiring school vision, providing effective leadership, creating the capacity for the school improvement, and creating a productive relationship with parents, SMC and PTA for improve academic performance can be effective where the introduction of the HRDI and learning process are effective. The study objective was achieved and the findings are in line with previous studies.

The findings are in line with those of Buabeng et al. (2020) found that training and professional development activities provided to school leaders and teachers, while concurrently evaluating variations and structures in the implementation of learning processes affected how school leaders achieved student performance. The study advocated for the integration of theory and practice in education to enhance academic performance. The introduction of training and professional development activities supported headteachers and teachers to develop their skills and knowledge for effective teaching. The findings of the study are also consistent with those of Para-Gonzalez (2018), who found human resource management practices and learning as having mediation roles in the relationship between transformational leadership and performance. Generally, the study agrees that such a relationship existed between leadership and performance in the school and HRDI and learning process influenced the relationship for better academic performance. The results are also consistent with Wang and Zhang (2020) findings which indicated that the frequency, difficulty, and variety of assessments exerted a moderating effect on the perception of teacher feedback and learner engagement, positively influencing the academic performance of students. Further, the findings are in line with Dunbar et al. (2018), who found a positive significant effect of learning environment and human resource capacity building in the relationship between leadership status and academic performance. This implies that capacity building and effective learning environments should be prioritized in schools.

In addition, the findings are consistent with those of Schlebusch et al. (2020), who found that the relationship between collaborative leadership and academic performance was affected by human resource intervention processes and learning methods within the schools. Schools must institutionalize human resource intervention processes and effective learning methods. Also, the findings of the current study are supported by the study of Khan et al. (2020), who found elements such as better-trained teachers, teaching work, and teaching workgroups to influence the relationship between instructional leadership and students' academic performance. The significant effects found in the current study also agree with the study of Belay et al. (2021), who highlighted similar findings. Their research postulated that professional learning and teaching climate mediate the influence of school leadership on school performance. The study highlights the importance of effective leadership in fostering a work environment that promotes employee engagement, innovation, and overall organizational performance. The findings of the present study are also supported by the findings of Balwant et al. (2019) who conducted a study on transformational instructor-leadership and academic performance, a moderated mediation model of student engagement and structural distance and found that student engagement was a full mediator, but structural distance was not supported as a moderator. The study, further, suggested that the teachers should be placed in professional training groups and discourage structural distance.

The findings are also in line with those of Grissom et al. (2021) who found that effective school leadership is positively correlated with student achievement and learning growth, principals' leadership behaviours, such as setting goals and expectations, facilitating collaboration, and providing support, are key predictors of student success, school leaders play a critical role in fostering a positive school climate, which in turn affects student motivation, engagement, and academic performance. The study highlights the importance of principal training and development programs that focus on building leadership skills to improve student outcomes. The study provides evidence that school leadership is a crucial factor in shaping student success and emphasizes the need for targeted investments in leadership development to enhance student learning and achievement. Effective HRDI will strengthen the mediating effect of learning process in the school to result in better academic performance. Therefore, school leadership must highlight such development interventions and learning process in schools.

The findings are also consistent with those of Gakenia et al. (2017), who found that leadership capacity development and learning resource availability affected the influence of strategic leadership style on the academic performance of national schools in Kenya. The researchers concluded that school leadership style as a sole variable was unable to influence the academic performance of their schools. The findings agree with the findings of Obama et al. (2016) in the study of the principals' leadership style and students' academic performance in public secondary schools. The study revealed that school principals utilize diverse approaches such as the creation of a conducive learning environment and support to teachers to influence students' academic performance. The findings also agree with those of Ghavifekr and Ramzy (2020) who conducted a study on exploring effective school principals' leadership and students' learning achievement and found that the influence of principals' leadership on students' learning achievements was affected by teacher's professional development, instructional supervision, and provision of a conducive learning environment. The results of the present study are in line with those in the study by Tedla and Redda (2021) on school leadership styles and school performance which revealed that the professional development of school principals and the creation of a learning environment affected the school leadership styles and overall school performance and student attainments.

The findings disagree with those of Maponya (2020), who conducted a study on the instructional leadership role of school principals on leaders' academic achievements and identified several key elements that instructional school leadership had on learner academic achievements. Some of the elements included enhanced learner academic achievement, motivational and positive influences on learners, effective instructional management, creation of a supportive and inclusive teaching and learning culture, provision of learner support and guidance, fostered parental involvement and engagement, strategic and flexible use of various leadership styles to adapt to diverse contexts and needs. The identification of elements provided for further studies to be conducted to examine the core mediators and moderators of the relationship between school leadership and academic performance. The findings of the present study also do not agree with Munir and Khalil (2016), who found that teacher perceptions were the main element affecting the relationship between the principals' leadership styles and academic performance at the secondary school level. The present findings indicate that learning process mediated the relationship, and HRDI moderated the mediation effect of learning process on the relationship

between school leadership and academic performance. The findings do not agree with those of Mayasari et al. (2021) that the principal's leadership, teacher performance and teaching methods had a partial and simultaneous relationship with student achievements. The study paved the way for further studies into the mediated moderation in the present study.

4.9 Summary of Research Findings

This section presents the analysis and interpretation of the data collected and tested. The results of the hypothesis tests are discussed, and the findings are summarized as follows: null hypotheses 1, 2, and 4 were rejected, while hypothesis 3 showed full mediation. A comprehensive summary of the research findings is presented in Table 31, providing an overview of the study's key outcomes.

Table 31: Hypotheses results summary

Research Objectives	Hypothesis	Hypothesis Test Results
Objective 1 To examine the relationship between school leadership and academic performance of public SHS in Ghana.	H_{01}: There is no statistically significant relationship between school leadership and academic performance in public Senior High Schools (SHS) in Ghana.	Rejected
Objective 2 To investigate the moderating effect of HRDI on the relationship between school leadership and academic performance of public SHS in Ghana.	H_{02}: Human Resource Development Interventions do not exert a statistically significant moderating effect on the relationship between school leadership and academic performance in public SHS in Ghana.	Rejected
Objective 3 To determine the mediating effect of the learning process on the relationship between school leadership and academic performance of public SHS in Ghana.	H_{03}: The learning process does not significantly mediate the relationship between school leadership and academic performance in public SHS in Ghana.	Partial mediation
Objective 4 To examine the moderated-mediation effect of human resource development interventions and learning process on the relationship between school leadership and academic performance of public SHS in Ghana.	H_{04}: There is no significant moderated-mediation effect of Human Resource Development Interventions and learning process on the relationship between school leadership and academic performance in public SHS in Ghana	Rejected

4.10 Optimum Model

Following the study's findings, a model optimization process was undertaken to develop a refined model that exclusively incorporates significant variables, ensuring objectivity. This endeavour aimed to distil the final model, devoid of extraneous factors. Regression analysis was employed to achieve this objective. The resultant optimized model is graphically represented in Figure 3, which showcases the new conceptual framework. This refined model provides a more

precise and parsimonious representation of the relationships between the study variables, thereby enhancing the predictive efficacy and interpretability of the study's outcomes.

The model shows that none of the study variables was dropped after the tests, whilst the null hypotheses were rejected the alternative hypotheses were accepted. Consequently, the optimal model as shown in Figure 3 indicates a significant relationship between school leadership and academic performance, a significant moderating effect of human resource development interventions on the relationship between school leadership and academic performance, a significant mediating effect of the learning process on the relationship between school leadership and academic performance, and a significant moderated-mediation of human resource development interventions and learning process on the relationship between school leadership and academic performance.

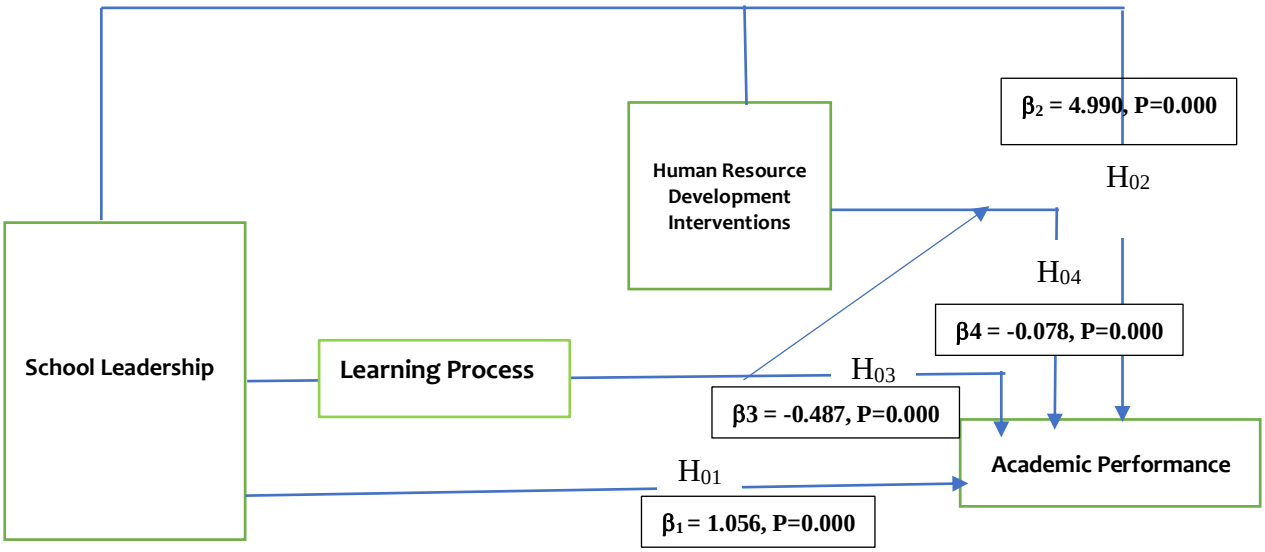

Figure 3: Optimum Model

4.11 Limitations of the Study

The study was limited in different ways. Firstly, the study is limited to learning process and HRDI affecting the relationship between school leadership and academic performance. A review of previous literature revealed there existed other variables that also affected the relationship between school leadership and academic performance. Those variables were not considered. The study focused on only four indicators of human resource development interventions, thus: technical training, supervision of instruction, support for professional training and coaching. However, previous studies revealed the existence of other indicators of HRDI that could moderate the relationship between school leadership and academic performance. Again, previous studies revealed that there existed other indicators of learning process other than active learning, learning opportunities, career orientation, and cooperative learning which were adopted in the present study.

Secondly, the study was limited by the scope. The study was confined to the 928 public senior high schools in the 16 regions of Ghana. The study did not consider the private senior high schools, public and private vocational/technical senior high schools, and STEM senior high schools in Ghana. Also, the study was limited to the geographical location of Ghana. Previous studies revealed that the WASSCE is an examination taken in countries such as Nigeria, Liberia, Sierra Leone, the Gambia, and Ghana. Only Ghana was considered in the present study. Also, the use of a quantitative research approach in the present study may limit the study findings if paralleled with the use of mixed methods. The generalization of the findings may be affected by the cluster-stratified random sampling technique used to select the respondents for the study.

The study also faced limitations due to its reliance on primary data collection methods, which lacked the researcher's control over response collection. Additionally, certain elements of the study were susceptible to significant changes over time, while human interactions were prone to various types of distortions, including selective recall and perception, omissions or additions of information, and uncertainties inherent to primary sources of data collection. These limitations may have impacted the accuracy and reliability of the data, so the researcher considered them before interpreting the study's findings. The study was also limited due to the use of the cross-sectional design survey, which cannot determine cause-and-effect relationships as data were collected at one point in time.

Finally, the study was challenged with logistical challenges due to the wide coverage. The study was limited to all the 16 regions of Ghana. Some of the selected schools were in remote places with unmotorable roads. The geographical coverage was wide and only the researcher could not have undertaken data collection within the time frame of the research. The researcher, therefore, employed the services of five research assistants to support the data collection.

4.12 Chapter Summary

In this chapter, the analysis of the data collected and tested was made. Also, discussions and interpretations of the findings are stated. Statistical tools such as descriptive statistics, correlation test and analysis, and regression test and analysis were utilized. The test results depicted indicate a significant relationship between school leadership and academic performance, a significant moderating effect of human resource development interventions on the relationship between school leadership and academic performance, a significant mediating effect of the learning process on the relationship between school leadership and academic performance, and a significant moderated-mediation of human resource development interventions and learning process on the relationship between school leadership and academic performance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the study summarizes the findings based on the objectives of the study and the results of the hypotheses tested. The chapter further underscores conclusions and recommendations to the results and analysis of the achievements of the study objectives. Recommendations are derived from the conclusions of the study in contributing to theory, policy and practice. The main aim of the study was to ascertain the relationship between school leadership, HRDI, the learning process, and the academic performance of public SHS in Ghana. The study also sought to examine the relationship between school leadership and academic performance of public SHS in Ghana, investigate the moderating effect of HRDI on the relationship between school leadership and academic performance of public SHS in Ghana, determine the mediating effect of the learning process on the relationship between school leadership and academic performance of public SHS in Ghana, and, examine the moderated-mediation effect of human resource development interventions and learning process on the relationship between school leadership and academic performance of public SHS in Ghana.

5.2 Summary of the Study

The main aim of the study was to ascertain the relationship between school leadership, HRDI, the learning process, and the academic performance of public SHS in Ghana. The specific objectives of the study include: examining the relationship between school leadership and academic performance of public SHS in Ghana; investigating the moderating effect of HRDI on the relationship between school leadership and academic performance of public SHS in Ghana; determining the mediating effect of the learning process on the relationship between school leadership and academic performance of public SHS in Ghana; and, examining the moderated-mediation effect of human resource development interventions and learning process on the relationship between school leadership and academic performance of public SHS in Ghana.

The study adopted the positivist approach to systematically analyze school leadership, human resource development interventions, learning process, and academic performance. The study employed a cross-sectional design to analyze the relationship between the study variables. Also, the study employed the quantitative method of self-administered questionnaires to collect information from respondents, using a population of 928 public senior high schools in Ghana as

of December 2023. Cluster-Stratified random sampling technique was used to select sample schools from the 16 strata to arrive at 2176 respondents. The reliability of the questionnaire was measured using Cronbach's alpha and the questionnaire was piloted before being administered. Four different null hypotheses were tested in the study. The first was there is no significant relationship between school leadership and academic performance in public SHS in Ghana. The second was that HRDI does not significantly moderate the relationship between school leadership and academic performance in public SHS in Ghana. The third null hypothesis was that learning process does not significantly mediate the relationship between school leadership and academic performance in public SHS in Ghana. The final null hypothesis was there is a significant moderated-mediation effect of human resource development interventions and learning process on the relationship between school leadership and academic performance in public SHS in Ghana.

The relationship between school leadership and academic performance was tested using the null hypothesis one: H_{01} - There is no significant relationship between school leadership and academic performance in public SHS in Ghana. The influence of school leadership on academic performance was tested using the indicators of school leadership against the indicators of academic performance to determine the influence of the dimensions. To test the hypothesis, the study adopted the regression model equation: $AP = ß_0 + ß_1 SL + è$. Where, AP represented the Academic Performance of public senior high schools, and SL represented School Leadership. The results ($AP = 1.056 + 0.669SL$, $R^2 = 0.406$, $p = 0.000$) of the model depicted a significant positive relationship between school leadership and academic performance. The study, therefore, rejected the null hypothesis (H_{01}) and concluded that school leadership influences academic performance in public senior high schools in Ghana.

The second objective of the study was to investigate the moderating effect of HRDI on the relationship between school leadership and academic performance of public SHS in Ghana. The second objective was tested using the null hypothesis two: H_{02} - HRDI does not significantly moderate the relationship between school leadership and academic performance in public SHS in Ghana. To conduct this test, three regression models were used. The models were presented as:

i. *Model 1: AP = 1.056 + 0.669SL*

ii. *Model 2: AP = ß$_2$ + ß$_3$ SL + ß$_4$ H + è*

iii. *Model 3: AP = ß$_5$ + ß$_6$ SL + ß$_7$ H + ß$_8$ SL*H + è*

Where, AP = Academic Performance of public senior high schools, SL = School Leadership, and H = HRDI (the moderator). The three models tested the status of the relationship of the variables before and after the moderation. The results of the tests are displayed as:

Model 1: AP = 1.056 + 0.669SL

Model 2: AP = 0.474+0.656SL+0.154H

*Model 3: AP = 4.990 – 0.518SL – 0.960H + 0.289SL*H*

The results (i.e., of the interaction term) indicated that ($R^2 = 0.417$, $p = 0.000$) human resource development interventions significantly moderated the relationship between school leadership and academic performance in public senior high schools in Ghana. This is also supported by the fact that the R^2 increased from 40.6% to 41.7% after the moderation. The study therefore rejected the null hypothesis (H_{02}) and concluded that human resource development interventions have a significant moderating effect on the relationship between school leadership and academic performance.

The third objective of the study was to determine the mediating effect of the learning process on the relationship between school leadership and the academic performance of public SHS in Ghana. The third objective was tested using the null hypothesis three: H_{03} - Learning process does not significantly mediate the relationship between school leadership and academic performance in public SHS in Ghana. To conduct this test, four regression models were used. The models were presented as:

i. *Model 1: AP = ß$_0$ + ß$_1$ SL + è*

ii. *Model 2: L = ß$_0$ + ß$_1$ SL + è*

iii. *Model 3: AP = ß$_9$ + ß$_{10}$ L + è*

iv. *Model 4: AP = ß$_{12}$ + ß$_{13}$ SL + ß$_{14}$ L + è*

Where, AP = Academic Performance of public senior high schools, SL = School Leadership, and L = Learning process. The first model showed the prediction of academic performance against school leadership, the second model presented the direct effect of school leadership on

the learning process, and the third model presented how Learning process was predicted against academic performance. Finally, in the fourth model, academic performance was regressed against school leadership and learning process. The tests were conducted using the mean scores of the study variables. The results of the tests are displayed as:

Model 1: AP = 1.056 + 0.669SL

Model 2: L = 2.061 + 0.306SL

Model 3: AP = 0.539 + 0.960 L

Model 4: AP = - 0.487 + 0.440SL + 0.749L

The test results show that in Models 1-3, the p-value was less than 0.05 and therefore significant. The results (i.e., Model 4) indicated that ($R^2 = 0.683$, $p = 0.000$) implied that learning process mediated the relationship between school leadership and academic performance can still be inferred. The study concluded that learning process fully mediated the relationship between school leadership and academic performance. This implied that the presence of learning process in the school influences the change in academic performance where school leadership remains constant.

The final objective of the study was to examine the moderated-mediation effect of human resource development interventions and learning process on the relationship between school leadership and academic performance of public SHS in Ghana. The hypothesis was analysed using two models. The first model analyses school leadership with the moderator and the interaction term of the school leadership and human resource development interventions. This approach prioritizes analyzing the moderation effect before examining the mediation. The second model analyses school leadership on academic performance with the mediator. The models were presented as:

(i) $AP = ß_{16} + ß_{17} SL + ß_{18} H + ß_{19} SL * H + è$

(ii) $AP = ß_{20} + ß_{21} SL + ß_{22} L + è$

Where, AP = Academic Performance of public senior high schools, SL = School Leadership, H = HRDI, L = Learning process, and SL*H = the interaction term of school leadership and HRDI. The tests were conducted using the mean scores of the study variables. The results of the tests are displayed as:

*Model 1: AP = 4.990 – 0.518SL – 0.960H + 0.289SL*H*

Model 2: AP = - 0.487 + 0.440SL + 0.749L

The test results show that the p-values in both Models 1 and 2 were less than 0.05 and therefore significant. This implied that there was an existence of mediated moderation in the model. The null hypothesis for the testing was that there is no significant moderated-mediation effect of HRDI and learning process on the relationship between school leadership and academic performance in public SHS in Ghana. After introducing the moderated-mediation effect of human resource development interventions and learning process, the model results depicted a significant positive relationship between school leadership and academic performance. The study, therefore, rejected the null hypothesis (H_{04}) and concluded that there is a moderated-mediation effect of human resource development interventions and learning process on the relationship between school leadership and academic performance of public SHS in Ghana.

5.3 Conclusion

The study examined the relationship between school leadership and academic performance of public SHS in Ghana and concluded that school leadership influences academic performance in public SHS in Ghana. The study revealed that effective instructional and supervisory roles school leadership ensure students' academic performance. School leadership is a crucial factor in shaping the academic outcomes of students. The findings support the existing literature. The indicators of school performance in the study are a postulation that the school leadership must have the requisite knowledge and skills, vision, and supervisory abilities, and must have the capacity to improve teaching and learning. The constructive outcomes of school leadership on academic performance are driven by the motivation of school leadership and a working teaching Staff. A school competent leadership exhibits a good structure in the school and is instrumental in cultivating a vision for learning, fostering communities of learning, and strategically allocating resources to support student success. Moreover, empirical literature suggested that school leaders' ability to develop and empower their human resources, namely the teachers, is central to enhancing academic performance.

The study also sought to investigate the moderating effect of HRDI on the relationship between school leadership and academic performance of public SHS in Ghana. Human resource

development has been analyzed as having a positive influence on the human resources of an organisation and causing a resultant effect on the outcomes. To concentrate on human resource development is to train and develop the human resources in the specialized areas of their work. The inclusion of human resource development interventions as a moderating effect in the present study indicated a positive significant influence on the relationship between school leadership and academic performance.

The study concluded that human resource development interventions have a significant moderating effect on the relationship between school leadership and academic performance. The human resource development interventions adopted in the study are not the exhaustive indicators available. However, a well-developed framework of human resource development interventions in the schools provides a mutual benefit to both the school and the human resources. Some of the areas that the human resource benefits are in the areas of professional growth, personal development, career advancement, well-being and self-care, job satisfaction and engagement. The school, also, benefits in terms of improved school outcomes, enhanced school reputation, increased efficiency and productivity, positive school culture, and innovative and adaptive leadership. The findings support previous research that where school leadership adopted human resource development interventions, it added value to the functions and operations of teaching and learning to contribute to the achievement of students' academic performance.

The findings of the present study confirm previous studies that HRDI enable teachers to design and deliver curricula that are relevant, engaging, and aligned with students' needs and interests. The present study concluded that HRDI provides teachers with the skills and knowledge to offer targeted support to students with special needs or learning difficulties. Through HRDI, teachers are also trained to design and implement effective assessments and feedback strategies, helping students understand their strengths and weaknesses. In addition, the findings of the study confirm that HRDI fosters a collaborative and supportive school culture, promoting a sense of community and shared responsibility for student success. HRDI also encourages the collaboration of teachers and parents through the PTA scheme to provide support to students and the school.

Further, the study sought to determine the mediating effect of the learning process on the relationship between school leadership and the academic performance of public SHS in Ghana. The study concluded that learning process fully mediated the relationship between school leadership and academic performance. This implied that the presence of learning process in the schools' affected changes in academic performance where school leadership remains constant. An important function of school leadership is to promote a quality learning process by ensuring teachers develop lesson plans, lesson contents, feedback, and facilitation that promotes learning. The findings in the present study are supported by previous studies that found that learning processes such as active learning, learning opportunities, career orientation, and cooperative learning seek to enhance the skills and knowledge of students, and also encourage morale for learning and understanding. The creation of a learning process is crucial to academic performance because it enhances understanding, improves retention, supports students in developing critical thinking and boosts confidence, promotes engagement, supports personalized learning, fosters creativity, supports students in developing study skills, enhances collaboration, and prepares students for lifelong learning. By focusing on the learning process, students develop essential skills and strategies that lead to improved academic performance, increased confidence and a lifelong love of learning.

The study concluded that the moderated-mediation effect of human resource development interventions and learning process on the relationship between school leadership and academic performance of public SHS in Ghana was positive. Students' academic performance improved through the integration of human resource development interventions and the learning process of school leadership. The study found a significant positive moderated-mediation effect of HRDI and learning process on the relationship between school leadership and academic performance. The findings of the study are in coherence with previous studies. Where school Principals and leadership focused on professional development and the creation of a learning environment it affected the school leadership styles and overall school performance and student attainments. Previous studies suggested that the influence of principals' leadership on students' learning achievements is affected by teacher's professional development, instructional supervision, and provision of a conducive learning environment. The leadership capacity development and provision of learning resources and environment affected the influence of strategic leadership style on the student's academic performance.

5.4 Recommendations

Based on the findings and conclusions, the study makes some recommendations that affect policy development and implementation, practice, and theory. The recommendations are in line with the objectives of the study. The recommendations are provided to tackle the innumerable challenges of school leadership, human resource development interventions, learning process and academic performance facing senior high schools in Ghana. By implementing these recommendations, the senior high schools in Ghana can improve academic performance, enhance the learning process, and develop effective school leadership and human resource development interventions. The study recommends emphasizing on learning process through which students can develop essential skills and strategies that lead to improved academic performance, increased confidence, and a lifelong love of learning; investing in staff growth and development that would improve teacher growth, student outcomes, and create a positive work environment.

5.4.1 Recommendations for Policy

The study makes recommendations for policy implementations at the secondary education level of the country. The study emphasizes the importance of school leadership to academic performance. The study concluded that school leadership was a crucial factor in shaping the academic outcomes of students. First, policymakers and decision-makers such as the Ministry of Education, GES, NTC, NaSIA, and NaCCA in Ghana should place priority on school leadership. Every second-cycle institution is appointed school leadership, which provides leadership, supervision and management in the school. Governmental bodies responsible for school leadership should focus on visionary leadership, teacher empowerment, and a student-centered approach when appointing school leadership. The Ministry or the Agency must appoint competent school leadership to the senior high schools and also, encourage the school leadership to develop a clear vision for academic excellence and student development. The school leadership must be encouraged to give teachers the autonomy to design engaging lessons and provide opportunities for professional growth. The school leadership must also be encouraged to foster a student-centered culture that prioritizes student needs and well-being.

Secondly, the study found that human resource development interventions have a significant moderating effect on the relationship between school leadership and academic performance. Therefore, the study recommends that national policymakers should critically consider

development interventions in policy-making to address the challenges of teacher development as well as poor supervision of instruction and coaching. The research highlights the urgent need for human resource development (HRD) interventions, the Ministry and other stakeholders, such as the GES, NTC, NaSIA, and NaCCA, must prioritize these needs in the schools. For instance, given the limited resources available, strategic policy decisions must be made by the Ministry regarding the allocation of facilities, equipment, materials, skilled personnel, and consultant fees to support HRD efforts. The Ministry must develop policies that prioritize HRD interventions, considering their potential impact on school performance and improvement, to maximize resource utilization and achieve desired outcomes. The Ministry of Education's policy should make continuous teacher training and development mandatory for school leadership and teachers. Such training and development programs should be facilitated, in various disciplines, by experts in various fields. The Ministry's policy should establish for each senior high school a designated HRD Officer and HRD Unit which is responsible for the affairs of continuous school leadership and teacher development. The role of the HRD Unit, in each institution, will be to review needs assessment and evaluation data and offer advice on the type and content of HRD intervention to be implemented.

The GES should also prioritize HRD interventions in policy and decision-making. While the purpose of national procedures and curricula about second-cycle institutions is to promote quality education, the GES should broach HRD interventions to enhance effectiveness. The study recommends that national policymakers should take an active interest in organizing education conferences, workshops and seminars to involve the various stakeholders in policy development. Such forums have become an integral part of decision-making whereby participants share ideas and experiences. The ideas and experiences of stakeholders that emanate from such conferences, workshops and seminars would shape policy proposals and ease implementation challenges. The increase in national cooperation among stakeholders to address domestic education challenges should therefore be seen by the various agencies as an opportunity to ensure effective reforms in the educational sector. Effective prioritization of HRD needs is achieved when there is widespread participation from individuals across the organization. By regularly seeking input from all stakeholders, GES can tap into their insights and ideas, refining and enhancing ongoing interventions to better align with the institution's and individuals' needs. This collaborative approach increases the likelihood that a greater number of

employees will view HRD programs as relevant, valuable, and personally beneficial, fostering a culture of engagement and investment in professional growth and development.

The NTC has a policy of introducing teacher licensure examinations and certification. This policy implementation is laudable and must be supported, however, continuous development and supervision of appointed teachers should be prioritized. The NTC's policy should align school leadership functions to academic performance, and the extent to which school leadership affects the teachers under NTC's training. One important question is, to what extent do performance ratings from the schools enhance the teacher examinations and certification? The policy on teacher examinations must have a positive agreement with the skill needs of the individual. When creating a program to address basic skill deficiencies, such individuals should operationally define each basic skill. Perhaps this is obvious, but the approach of stakeholder engagement is best used for trainers who are highly motivated to learn and successfully pass the assessment involved. As with most interventions, support from stakeholders is an important ingredient for the successful completion and passing of the teacher licensure examinations and certification.

Based on the findings of this study, NaSIA should have policy and decisions that mandates school leadership to prioritize HRD interventions. Inspection criteria and quality control mechanisms must include the school leadership's ability to roll HRD interventions in the school. This suggests that NaSIA will likely need to inform and educate school leadership about the essence of HRD interventions and the extent to which it seeks to support them. The NaCCA's policy on curriculum should also highlight the body of skills that the qualified teacher at the senior high school level should possess. Most newly appointed teachers require preparation to develop a conceptual understanding of teaching subjects. When new technologies are integrated into the curriculum, teachers must receive corresponding updates to their skills and training. Institutions can support this through job-specific technical training programs, equipping teachers with the necessary expertise to effectively implement and utilize these new technologies in their teaching practices.

Furthermore, it became evident from this study that students' academic performance is a responsibility of school leadership and creation of a learning process mediates the relationship between school leadership and academic performance. The study recommends that school

leadership should be cognizant of their roles and responsibilities and ensure the creation of a learning process in policy implementation. In facilitating policy implementation, school leadership should ensure timely supply and delivery of teaching materials and build the capacity of the school on innovative classroom management strategies. National policymakers should ensure that the national policy on the senior high school curriculum is reviewed to make the learning process a priority. Policies on education curricula should decree the ways that teachers and students should engage in the classroom on various subjects. The policy should emphasize on creation of learning processes such as active learning, learning opportunities, career orientation, and cooperative learning within an inclusive learning environment that will meet the diverse learning needs of students. National policy should also be robust, clear and tenable on a definite secondary education system, external of political influence in Ghana. National policy should not be left in the hands of politicians.

5.4.2 Recommendations for Practice

The study makes recommendations for practice in educational leadership, management, and administration. The findings in this study underline the importance of school leadership to academic performance. School leadership plays a vital role in the senior high school. The Ministry and GES should ensure the appointment of a competent governing board to the school. The findings of this study ensure the need to comply with leadership roles to achieve the expected student outcomes. School leadership should be guided by the findings in this study when fulfilling their responsibilities in the school. For instance, the school leadership should ensure a sound governance structure for the school. This will promote accountability, transparency, and fairness in decision-making, and achievement of the expected outcomes. A sound governance structure will result in properly assigned teachers to subjects, adequate monitoring and supervision of teachers and teaching, adequate coaching of teachers, and adequate supervision of students' learning and completion rate of tasks.

In addition, the study provides evidence that school leadership is a crucial factor in shaping student success and emphasizes the need for targeted investments in leadership development to enhance student learning and achievement. School leadership should ensure continuous teacher training and development in the school. The findings of the study revealed that human resource development interventions moderate the relationship between school leadership and academic performance. School leaders play a critical role in fostering a positive school climate, which in

turn affects student motivation, engagement, and academic performance. The study highlights the importance of principal training and development programs that focus on building leadership skills to improve student outcomes. Most of the human resource development interventions will take place while the teachers are at the post. Therefore, school leaders are responsible for deciding when teachers need human resource development. Identifying training needs involves asking a series of questions, which may seem familiar to the school leader. This process is akin to the analysis managers conduct when developing an organization's structure to achieve strategic objectives. However, in this context, the focus shifts to enhancing academic performance and student achievements. The questions help educators and administrators pinpoint areas where students require additional support, enabling targeted interventions to bridge knowledge gaps and foster improved academic outcomes.

School leaders must also recognise that implementing HRDI is very important because of the constantly evolving of the school system, policies and practice. These changes imposed on schools as a result of policy or job design or a technological breakthrough also will require human resource development. School leadership should work in collaboration with other stakeholders to build the capacity of teachers for professional and career development to ensure transiting learners into a larger community. School leadership are responsible for helping staff to learn every time they welcome new staff, plan how they are going to acquire the know-how required, provide for them to receive systematic guidance and instruction on the tasks they have to carry out and see that the plan is implemented.

During the induction stage, school leaders must ensure that teachers and staff have a clear understanding of their responsibilities and possess the necessary knowledge and skills to fulfil them. If leaders suspect that their staff may lack certain skills but demonstrate potential, they should provide additional guidance and support to bridge the gap. This proactive approach enables teachers to develop their capabilities, build confidence, and succeed in their roles, ultimately enhancing the overall quality of education. School leadership must prioritize technical training for teachers, which may involve further formal education and professional development opportunities. This enables teachers to acquire the necessary knowledge and skills to effectively teach and guide students, enhancing their capacity to deliver high-quality education. Moreover, this training equips teachers to design and implement efficient career

guidance processes, fostering academic excellence and empowering students to reach their full potential.

Further, to enhance teacher learning, school leaders should leverage instructional supervision techniques, particularly when teaching manual skills. It is a systematic intervention implemented to ensure that school leadership implements planned changes effectively in the classroom. This structured approach will involve a four-stage sequence: preparation, where the school leader or head develops a comprehensive plan to present the subject matter, incorporating appropriate teaching methods, visual aids, and demonstration tools; presentation, the leader delivers a combined lecture and demonstration, providing a clear explanation of the skill; demonstration, where the leader provides a hands-on demonstration of the skill, allowing teachers to observe and practice; and, follow-up, where the leader offers ongoing support and feedback to ensure teachers have mastered the skill. By implementing this sequence, school leaders can optimize teacher learning and skill development.

Another technique is the support for professional training. Personal development planning may be carried out by the individual, but it should be supported with guidance, encouragement and help from school leadership and policy as required. A personal development plan will outline the specific steps individuals intend to take to enhance their skills and knowledge. While individuals are accountable for creating and executing their plans, they will receive guidance and support from school leadership to ensure success. This collaborative approach empowers individuals to take ownership of their growth and development, with school leadership providing resources and encouragement to help them achieve their goals. The support could mean that institutions of learning and programme selection are approved, financial support, and flexible work hours to allow space for the studies.

The need for coaching can arise from both formal performance reviews and informal daily interactions. Coaching opportunities can emerge at any time, and effective coaching involves: providing individuals with regular feedback on their performance; ensuring clarity on expectations, knowledge, and skills required to complete tasks successfully; leveraging everyday situations as learning opportunities; and encouraging individuals to think critically and develop solutions to complex problems. By adopting this approach, coaching becomes an ongoing process that empowers individuals to grow, develop, and excel in their roles. To excel

in coaching for improved performance, the individuals, appointed as coaches by the school leadership, must recognize that their role is to facilitate learning and foster motivation in others. The individuals to be coached should acknowledge that their current knowledge, skills, and behaviours require continuous improvement to achieve optimal performance. By embracing this mindset, school leadership can create a supportive environment that encourages growth, development, and excellence among their school team members. The Ministry and GES should intensify efforts to supervise school leadership and teachers to ensure that school leadership and teachers function as expected. The Ministry should afford a visible budget and invest in continuous professional development training and development for school leadership and teachers. These commitments will strengthen the leadership and enhance teaching for the expected results in the schools.

The study recommends that school leadership should ensure learning processes and the availability of resources for teaching and learning. The findings of the study revealed that an important function of school leadership is to promote a quality learning process by ensuring teachers develop lesson plans, lesson contents, feedback, and facilitation that promote learning among students. The Ministry should invest in senior high schools and ensure students' access to full core textbooks. The GES should organise WASSCE boot camps to provide support to struggling schools. This initiative will bring together school leadership and teachers from selected schools to equip them with the necessary tools and strategies to effectively prepare their students for the WASSCE. The study recommends that senior high school curriculum should be closely monitored to ensure coverage, quality internal assessment of students, provision of effective and efficient feedback mechanisms to students, and students' satisfaction with learning.

The Ministry, GES, NaSIA, NTC, NaCCA, and other agencies and investors can exploit the findings of this study and take systematic advantages to contribute to the improvement of WASSCE results in the country. The introduction of the STEM initiative in the country meant that a lot of investment should be made in teaching and learning of the core subjects (i.e., English, Mathematics, Science, Social Studies) in the country. The study also recommends that policymakers and decision-makers should enhance the collaborative working relations with the parents and guardians of students under the Parent-Teacher Associations (PTA) to exploit the findings of this study to improve students' academic performance.

5.4.3 Implications for Theory

The study makes some contributions to the theories of the variable of study. The study is anchored on social learning theory and distributed leadership theory to facilitate the researcher's examinations of the moderated-mediation influence of HRDI and the learning process on the association between school leadership and academic performance. The findings of the study contribute to the theory of the relationship between school leadership and academic performance. The theory suggests that the concept of school leadership drives students' academic achievements and school outcomes. The study found that school leadership exhibited shared leadership with headteachers and teachers in the school. The collaboration between the governing board and teachers resulted in the expected student outcomes. The findings corroborate preceding findings that school leadership influence students' academic performance.

Also, the study found that human resource development interventions moderate the relationship between school leadership and academic performance. The findings contribute to the theory on human resource development interventions, school leadership and academic performance. The study concluded that human resource development interventions have a significant moderating effect on the relationship between school leadership and academic performance. Senior high schools could be made viable in the current economic development if human resource development interventions are made a priority in the schools. This is because the study found out that human resource development interventions affected changes in behaviour and teaching styles of teachers which in turn affected the behaviour of students. Human development theorists postulated that HRDI affects the change of individual attitudes, beliefs, problem-solving strategies, and interpersonal skills that are best used in improving individual work methods and performance. The study findings confirmed these suggestions of earlier researchers, thereby contributing to the theory.

In addition, the findings contribute to the theory of the relationship between school leadership learning process and academic performance. The study found that learning process fully mediated the relationship between school leadership and academic performance. The learning process is the process learners undertake towards the acquisition of new knowledge and skills and ultimately impacts their thoughts, behaviours, and choices. The study found that learning processes such as active learning, learning opportunities, career orientation, and cooperative

learning mediate the relationship between school leadership and academic performance, thereby seeking to enhance the skills and knowledge of students, and also encourage morale for learning and understanding.

Furthermore, the study suggested a new conceptual model to supplement the understanding of school leadership theory through the integration of learning process and HRDI in the relationship between school leadership and academic performance. The findings of the study corroborated the moderated-mediation effect of HRDI and learning process on the relationship between school leadership and academic performance. Previous studies did not consider the integration approach adopted in the present study to improve the effectiveness of school leadership and thereby, affect students' academic performance. The present study focused on the interaction term of HRDI and learning process to examine the relationship between school leadership and academic performance. The study found a significant positive moderated-mediation effect of HRDI and learning process on the relationship between school leadership and academic performance. The findings enlarge the theory on human resource development, learning process, school leadership and academic performance.

5.4.4 Recommendations for Further Research

The study focuses on the relationship between school leadership, learning process, human resource development interventions, and academic performance of public SHS in Ghana. The study recommends that future research should be conducted on the leadership styles prevalent in senior high schools. The study was focused on the 928 public SHS in Ghana as at December 2023. Additionally, future studies should investigate variables across both public and private SHS, as well as public and private vocational/technical SHS and STEM SHS in Ghana. A similar study could also be conducted involving Junior High Schools in the country.

The study recommends for future researchers to concentrate on introducing other mediating and moderating variables into the relationship between school leadership and academic performance. Those variables may identify the other factors that also moderates and mediates the relationship between school leadership and academic performance. Also, future researchers should concentrate on other school outcomes, such as enrollment rate or access, quality, and completion rate. In addition, the study recommends that future researchers should construct other human resource development interventions and test its effect on the relationship between

school leadership and academic performance. Future researcher could also concentrate on other learning process and academic performance.

Furthermore, the study recommends that a similar study should be conducted in different countries. Another research could be conducted using the same study variables but a different research design and method. Also, it will be worth investigating school leadership styles and its effect on academic performance. Thus, further studies could be conducted to identify the various leadership styles and how each style affected academic performance in different schools.

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APPENDICES

Appendix I: MUA Letters to Stakeholders for Permission

The Management University of Africa | MUA
Sponsored by the Kenya Institute of Management

Date: 16th January 2023

TO WHOM IT MAY CONCERN

This is to confirm that Afram Kwame Owusu-Ansah Owusu Admission number DMLG/1/00004/2/2016 is a student of the Management University of Africa (MUA) currently pursuing a Doctor of Philosophy (PhD) degree in Management and Leadership. As part of the requirement for the degree programme, the student is expected to carry out a study and write a thesis on a topic of choice. The topic is "School leadership, human resource development interventions, learning process, and academic performance of public Senior high schools in Ghana" on which he is developing a proposal before collecting data and finally writing his thesis.

The University wishes to request for assistance and cooperation from all the concerned parties the student will be engaging with in the course of his study.

Yours faithfully,
Management University of Africa

Dr. John Cheluget, PhD
Deputy Vice-Chancellor

MANAGEMENT UNIVERSITY OF AFRICA
09 JAN 2023
P.O. Box 29677-00100, NAIROBI

Disclaimer:*Data collection and thesis writing is the sole responsibility of the student and MUA takes no responsibility on the student's activities and shall not be held liable for his/her actions*

The Management University of Africa | Popo Road, Off Mombasa Road Bellevue, South C | P.O. Box 29677,00100 Nairobi, Kenya
|Tel: (020) 2361160,2361161, 3569117 | Cell: 0722224193, 0706035244, 0706035299 | Email: vc@mua.ac.ke | www.mua.ac.ke

The Management University of Africa

Sponsored by the Kenya Institute of Management

Date: 13TH MARCH 2024

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

REF: KWAME OWUSU-ANSAH OWUSU AFRAM– PHD CANDIDATE

This is to confirm that **KWAME OWUSU-ANSAH OWUSU AFRAM–** admission number**: DMLG/1/00004/2/2016** is a student of the Management University of Africa (MUA) currently pursuing a Doctor of Philosophy (PhD) degree in Management and Leadership. As part of the requirement for the degree programme, the candidate is expected to carry out a study and write a thesis on a topic of choice. The topic is **"SCHOOL LEADERSHIP, HUMAN RESOURCE DEVELOPMENT INTERVENTIONS, LEARNING PROCESS, AND ACADEMIC PERFORMANCE OF PUBLIC SENIOR HIGH SCHOOLS IN GHANA"** on which he has developed and successfully defended a proposal which has been approved by the University. He is now expected to collect data before finally writing his thesis.

The University wishes to request for assistance and cooperation from all the concerned parties the student will be engaging with in the course of his study.

Yours faithfully,
Management University of Africa

Dr. John Cheluget, PhD
Deputy Vice-Chancellor- Academics, Research and Extension

Disclaimer:*Data collection and thesis writing is the sole responsibility of the student and MUA takes no responsibility on the student's activities and shall not be held liable for his/her actions*

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APPENDIX II – QUESTIONNAIRE

Dear Participant:
I humbly invite you to participate in a research study entitled "School Leadership, Human Resources Development Interventions, Learning Process and Academic Performance of Public Senior High Schools in Ghana".
Your participation in this research project is completely voluntary. Your responses will remain confidential and anonymous. The following questionnaire will require approximately 10 minutes to complete. Data from this research will be kept locked and reported only as a collectively combined tool. No one other than the researchers has access to your answers to this questionnaire.
Thank you for your assistance in this important endeavor.

SECTION A: Demographic Profile (*Tick the appropriate answer)*

1. **Gender:**
   Male ☐ Female ☐

2. **Designation**

   SMC Chairperson ☐
   Headmaster ☐
   Assistant Headmaster ☐ please, specify portfolio:……
   Head of Department ☐ please, specify the Department: ……

3. **Geographical Location/District……..**

4. **Term…….**

5. **How many years have you worked in the school?**
   Less than 3years ☐
   Between 3 and 6 years ☐
   Between 7 and 10 years ☐
   Above 10 years ☐

6. **Education Qualification**
   Certificate ☐
   Diploma ☐
   Bachelor's Degree ☐
   Post Graduate Degree ☐
   Other ☐ Please, specify: _____

SECTION B: SCHOOL LEADERSHIP (*Tick the appropriate answer)*

Please indicate how your institution handles the following aspects of leadership and learning

No	Statement					
		1	2	3	4	5
1	The school management committee possess the required knowledge and skills to perform their duty					
2	The school has documented a clear vision which is known by all stakeholders					
3	The school has a strategic plan they follow to support the teaching and learning activities in the school					
4	The School Board does not interfere with the work of Headmasters and Headteachers					
5	The headmasters have productive relationships with the School's Management Committee (SMC)/Board and the Parent Teacher Asociation (PTA)					
6	The headmasters and teachers' team have demonstrated a capacity to improve teaching					

process on a scale of 1 to 5, where; 1 = strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5=Strongly Agree

No	Statement					
		1	2	3	4	5
7	The School Management Committee evaluates the performance of headmasters, headteachers and teachers					
8	The headmasters and teachers' team have demonstrated a capacity to improve learning outcomes					
9	Formative evaluation of headmasters, headteachers and teachers enhances academic performance					

LEARNING PROCESS

No	Statement					
		1	2	3	4	5
10	The school provides up-to-date information relevant to the lesson being taught					
11	The school ensures that teaching instructions are clear					
12	The school ensures that teaching and learning materials clarify learners' misunderstandings, encourage discussion among them and help identify their successes					
13	The school provides teaching and learning models by enacting or thinking aloud					
14	The school ensures that teaching and learning materials link lessons to other content knowledge, students' daily life or culturally relevant situations					
15	The school ensures that Teachers use questions, prompts or other strategies to determine and guide learners' level of understanding					

Active Learning

No	Statement					
		1	2	3	4	5
16	The school ensures that learners are tasked on a structured curriculum					
17	The school ensures that Teachers provide tasks that engage and challenge learners					
18	The school ensures that Teachers teach by asking open-ended questions to learners					
19	The school ensures that Teachers adjust teaching to the level of the learners					

Learning Opportunities

No	Statement					
		1	2	3	4	5
20	Teaching materials and Teachers promote high expectation of learner's behaviour					
21	Teaching materials and Teachers provide equal opportunities to boys and girls					
22	Teaching materials and Teachers focus on the expected behaviour, rather than the undesired behaviour					
23	Teaching materials and Teachers support learners with special educational needs					

Career Orientation

No	Statement					
		1	2	3	4	5
24	Proportion of learners successfully completing teacher's task during the lesson					
25	Various stages of the lesson materials are built on practical skills					
26	Operationalization of Career guidance activities boosts learning					
27	Teaching materials encourage learners to make decisions, formulate, and act out plans to manage changes and transitions in their learning					

Corporative Learning

No	Statement					
		1	2	3	4	5
28	Teaching materials promotes Learners to volunteer to participate in the lesson					
29	Teaching materials facilitate Learner's engagement during the lesson					
30	Learners work collaboratively with each other during lesson					
31	Learners accept feedback from peers and teachers and work with them					

SECTION C: HRDI (*Tick the appropriate answer)*

Please indicate how your institution handles the following aspects of human resource development interventions on a scale of 1 to 5, where; 1 = strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5=Strongly Agree

No	Statement	1	2	3	4	5
	Technical Training					
32	I have completed my teacher license education					
33	I have completed the professional standards and ethics competences training					
34	I have participated in school-based/cluster based in-service training					
35	I have participated in rank-based programmes (community of practice)					
	Supervision of Instruction					
36	My teaching notes are checked by my supervisor to ensure that they are consistent with the goals and direction of the school					
37	My classroom priorities are checked by my supervisor to ensure that they are consistent with the goals and direction of the school					
38	My classroom teaching instructional practices has been reviewed by the Conference of Teaching Review					
39	I received feedback on specific strengths in teacher's instructional practices in post-observation					
40	I received feedback on specific weaknesses in teacher's instructional practices in post-observation					
41	I get support for portfolio building					
42	I obtained good score in annual performance appraisal					
	Support for Professional Development					
43	I have received support for continuous professional development					
44	I have participated in professional learning community (PLC) programmes					
45	I have received support to attend external workshops, seminars, and forums					
46	I have participated in job assignments or projects completed on-the-job					
	Coaching					
47	I constantly meet with school leaders/supervisor to discuss my role					
48	I was assigned a supervisor on my first appointment					
49	I get support from my supervisor in my professional work					
50	I have been on secondment at the same grade to other schools					

ACADEMIC PERFORMANCE

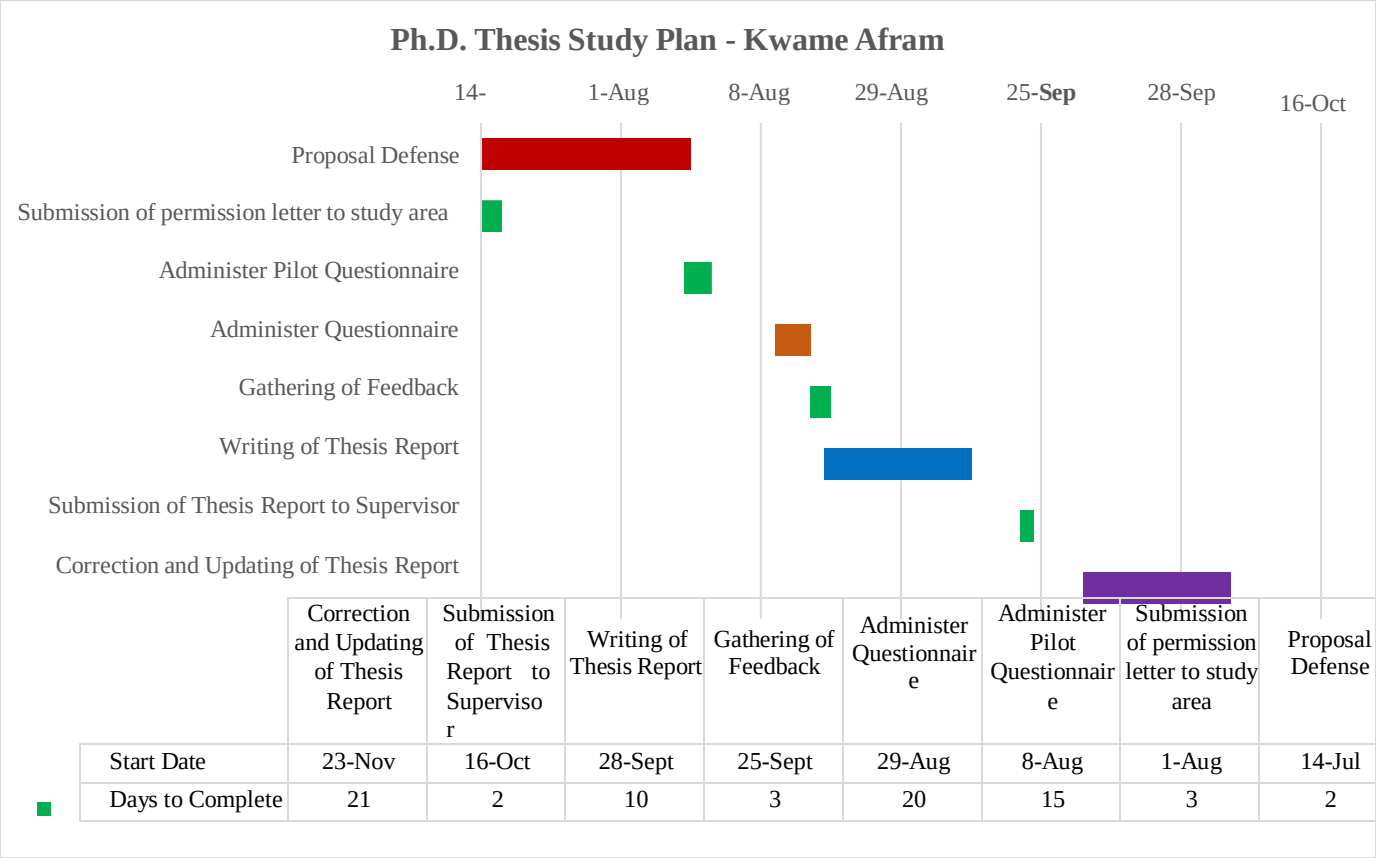
Please indicate your Institution's Academic Performance on a scale of 1 to 5, where; 1 = strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5 = strongly Agree

No	Statement					
		1	2	3	4	5
51	the school's WASSCE performance in the core subjects has been decreasing					
52	on average, students' end-of-term exam scores in core subjects have been poor					
53	on average, students' mock exam scores in core subjects have been poor					
54	Proportion of students successfully complete teachers' task during the lesson					
55	students volunteer to participate in lesson tasks					
56	students accept feedback from peers and teacher and work with them					
57	students ask questions during lesson					
58	students are unable to balance their learning in the four core subjects					
59	the school has not been recognised for students' academic performance					
60	students are allowed to work and produce in a group					
61	teachers discuss feedbacks with students to ensure students' understanding					
62	students have good grades in group work and group presentation					
63	students attendance to class has been poor					
64	students are rewarded for good grades					

Thank you very much for your time.

APPENDIX III: Ph.D. STUDENT WORK PLAN

STUDY PLAN FOR THE NEXT SIX (6) MONTHS



	Correction and Updating of Thesis Report	Submission of Thesis Report to Supervisor	Writing of Thesis Report	Gathering of Feedback	Administer Questionnaire	Administer Pilot Questionnaire	Submission of permission letter to study area	Proposal Defense
Start Date	23-Nov	16-Oct	28-Sept	25-Sept	29-Aug	8-Aug	1-Aug	14-Jul
Days to Complete	21	2	10	3	20	15	3	2

BUDGET

NO.	ACTIVITY	COST	FUNDS
1	Submission of letter to Study Area Authorities	GH₵2000	Self-funded
2	Administer Pilot Survey and gathering feedback	GH₵10000	Self-funded
3	Administer Questionnaire on main survey and gather feedback	GH₵15000	Self-funded
4	Writing of Thesis Report and defense	GH₵1000	Self-funded
	Total	**GH₵28,000**	

APPENDIX IV: DISTRIBUTION OF SAMPLE SIZE

Region	Category of Schools	Number of Schools	Respondents
Greater Accra	Category A	15	4
	Category B	18	5
	Category C	37	11
Ashanti	Category A	11	3
	Category B	64	19
	Category C	99	29
Ahafo	Category A	3	1
	Category B	14	4
	Category C	9	3
Bono East	Category A	1	0
	Category B	14	4
	Category C	18	5
Volta	Category A	5	1
	Category B	15	4
	Category C	72	21
Central	Category A	12	3
	Category B	24	7
	Category C	59	17
Western North	Category A	1	0
	Category B	10	3
	Category C	9	3
Western	Category A	7	2
	Category B	16	5
	Category C	30	9
Northern	Category A	4	1
	Category B	4	1
	Category C	34	10
Savannah	Category A	0	0
	Category B	0	0
	Category C	16	5
Oti	Category A	0	0
	Category B	4	1

Region	Category of Schools	Number of Schools	Respondents
	Category C	27	8
Eastern	Category A	16	5
	Category B	39	11
	Category C	99	19
Upper West	Category A	4	1
	Category B	8	2
	Category C	32	9
Upper East	Category A	6	2
	Category B	3	1
	Category C	40	12
North East	Category A	1	0
	Category B	0	0
	Category C	15	4
Bono	Category A	6	2
	Category B	27	8
	Category C	13	4
Total		**928**	**272**

APPENDIX V: 2021 SCHOOL PERFORMANCE REPORT OF NATIONAL SCHOOLS INSPECTORATE AUTHORITY (NaSIA), GHANA

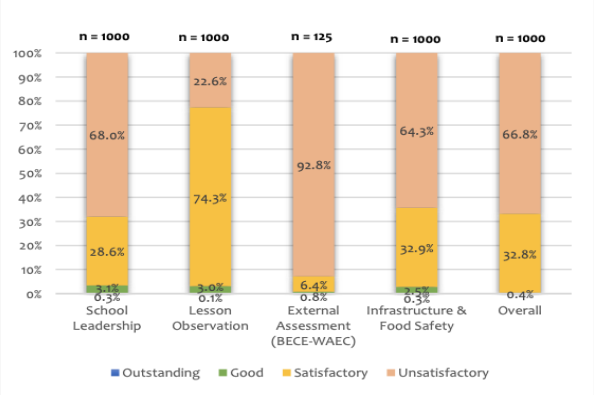


Figure 4.1a: Quality of Overall School Performance

Figure 4.1b: Average Rating of Overall School Performance

4.2 School Leadership

The average School Leadership rating for all schools inspected was **Unsatisfactory (1.77)** (Figure 4.2b). Almost one-third of the schools inspected **(32%)** were rated **Satisfactory, Good, or Outstanding** for school leadership while two-third **(68%)** were rated **Unsatisfactory** (Figure 4.2a), suggesting that majority of schools failed to meet the acceptable level of performance for school leadership. The average rating for the indicator – 'Sets Clear and Inspiring School Vision' was **Unsatisfactory (1.49)**, indicating that the school leadership mostly has no documented and shared vision on how to improve teaching and learning outcomes for learners. The indicator – 'Provide Effective Leadership for Teaching and Learning' was rated **Unsatisfactory (1.65)** for all schools. The 'Capacity to Improve the School' indicator was rated **Unsatisfactory (1.79)** as well. The ability of leadership to have a Productive Relationship with Parents, SMC, and PTA was rated **Satisfactory (2.14)** (Figure 4.2b).

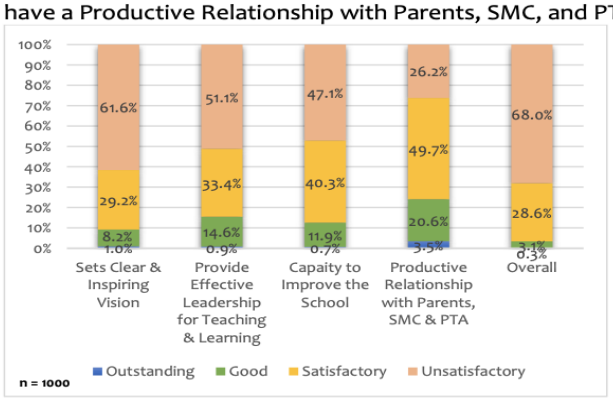


Figure 4.2a: School leadership performance

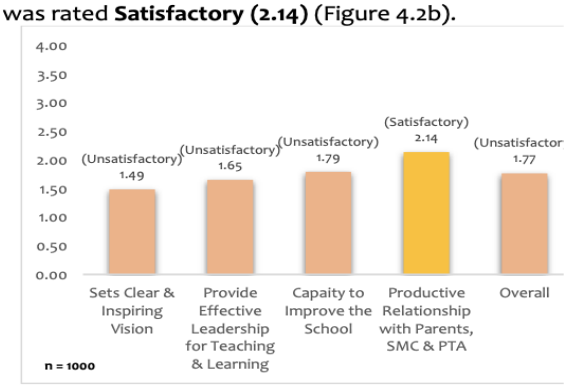


Figure 4.2b: Average score of school leadership

4.3 Lesson Observation

https://www.nasia.gov.gh/wp-content/uploads/Aggregate-Report_GALOP_School-Performance-Plus-Inspections_22SEP2021.pdf

APPENDIX VI – NATIONAL PRINT MEDIA REPORTAGE – October 11, 2022 (Page 28)

Visit: www.graphic.com.gh/ahotwoz
www.graphic.com.gh/graphicsports
www.graphic.com.gh/mirror
now Online
Daily Graphic, Tuesday, October 11, 2022.

Education

Allow heads of SHSs to work

• Board of directors advised

From Kwadwo Baffoe Donkor, JACHIE

THE Kumasi Metropolitan Director of Education, David Oppong, has advised the governing board of senior high schools (SHS) not to take over the day to day administration of the schools but to allow the head teachers the free hand to work.

He said even though the board of directors were to help formulate policies and guide the management of the schools, they should "allow the headmasters the free hand to implement the policies and manage the schools."

He also urged the head teachers to always consult the board on all decisions so as not to create any problems for themselves and the board and also create animosity between the management of the schools and board of directors.

Importance

Mr Oppong who also has oversight responsibilities for the Ashanti Regional Directorate of Education, gave the advice during the inauguration of the first board of directors for Osei Adutwum SHS at Jachie in the Bosomtwe District in the Ashanti Region.

He said per the regulations of the Ghana Education Service (GES), every SHSs was expected to have a governing board to assist the management of the schools to administer the school.

"The boards must allow the headmasters the free hand to implement the policies and manage the schools."

However, he said since the then Lakeview SHS owned by the current Minister of Education, Dr Yaw Osei Adutwum, was absorbed into the public sector four years ago, it had been able to have a functional board to advise management of the school.

Consequently, he said with the inauguration of the board, the management of the school would have to cede some of the roles it took in the past to the board and allow the board to direct them to ensure that the school was well managed to live up to the expectation.

The Chairman of the board of directors of the school, Nana Wireku Ampem Opoku, said the board had a very huge task ahead of ensuring that the school maintained its standard in education and also improved on the infrastructure of the school.

Already, he said the school had a challenge with a dormitory for girls and said there was the need to build one in the very near future to accommodate the increasing number of girls in the school.

• Members of the board of the Osei Adutwum SHS

16 Certified solar photovoltaic installers graduate

Investing in a sustainable and green future for ... "The partnership is supporting the ...