CHAPTER ONE

INTRODUCTION

Background to the Study

Physics teachers' effectiveness may have effects on high-quality teaching on student learning in terms of achievement gains. The quality of teaching as the dynamic and interactive process of creating, fostering, adapting, and negotiating learning environments in which all students are supported in activities that have a good chance of improving learning. Physics teacher's effectiveness can thus both be assessed focusing on the outcome itself (achievement gains) as well as teachers' behaviours (high-quality teaching) that should, broadly speaking, contribute to the outcome. Accordingly, physics teachers' effectiveness is commonly operationalised and evaluated in terms of gains in students' achievement test scores or qualification of physics teachers' performance in the classroom by principals, supervising teachers' or other external parties, with the latter typically involving classroom observations of teachers' or pre-service teachers' using standardised observation tools (such as the Classroom Assessment Scoring System, (Hamre, 2013).

Senior secondary school in particular is a critical stage in the educational journey, as it prepares students for higher education and the workforce. However, Benin metropolis may have witnessed declining students' learning outcome and teachers' morale in recent years, prompting concerns about the quality of school leadership. Against this backdrop, it is essential to investigate the principals' administrative performance as predictor of physics teachers' effectiveness. Research may have shown that effective principals possess specific leadership skills, knowledge, and performance

that foster positive school climates, promote teachers' development, and enhance student outcomes. Principals' administrative performance is a critical factor in shaping their leadership style, decision-making, and instructional management. In Nigeria, the importance of principals' administrative performance is underscored by the National Policy on Education (2014), which emphasises the need for effective school leadership to achieve educational goals. However, empirical evidence on the predictive power of principals' administrative performance on physics teachers' effectiveness in senior secondary schools in Benin Metropolis in Edo State is scarce.

The principal is the administrative head of a secondary school, managing the activities and programmes as well as the available resources for productivity and quality outputs. Such resources include the human, material, financial, energy and time resources. They are managed for improved teachers' job effectiveness. The principal, as the leader of secondary school, is responsible for supervision and other administrative tasks for improved teachers' job effectiveness (Nwabueze, 2016). The principal provides proper direction and effective co-ordination within the school to develop and maintain effective educational programmes and promote the improvement of teaching and learning in the school.

The number of years a teacher has been in the profession often correlates with improved teaching effectiveness, although this relationship is not always linear. Research shows that physics teachers tend to improve their instructional skills during the early years of teaching, with notable gains in student outcomes. However, these improvements typically level off after about five years of teaching performance (Chetty, Friedman, & Rockoff, 2014). Further studies suggest that the impact of performance is

also contingent on the quality of professional development and support that teachers receive. Performance of physics teachers' may develop better classroom management strategies, and their familiarity with the curriculum allows them to adjust and differentiate instruction effectively. The importance of creating systems to support both novice and effective teachers is critical in ensuring sustained physics teachers' effectiveness throughout their careers.

Teachers' qualifications could be derived from classroom observations students survey, are central to evaluating teachers' effectiveness. The validity of teachers' evaluations has been a topic of ongoing debate, with some studies suggesting that relying on student achievement data alone may not fully capture teachers' quality (Jackson & Bruegmann, 2019). Other research points to the value of incorporating multiple sources of data, such as peer reviews and self-assessments, to provide a more comprehensive evaluation of physics teachers' effectiveness. In fact, recent developments in Value-Added Models (VAM) for teachers' evaluations have prompted discussions about the fairness and accuracy of using standardised test scores to measure physics teachers' effectiveness. The evolving nature of teachers' rating systems underscores the importance of balancing quantitative measures with qualitative insights into teaching practices.

Gender difference dynamics continue to play a significant role in shaping educational outcome for both teachers and students. Research has shown that gender difference influences teaching styles, with male and female teachers often adopting different classroom management methods and pedagogical approaches (Gartland & Johnson, 2020). Studies have showed that students' academic performance and self-

concept may be affected by the gender of their teachers. For instance, some male students perform better in classes taught by male teachers, while female students tend to do better in classes taught by female teachers, although the evidence is mixed (DeAngelis, 2020). Furthermore, gender imbalances in the teaching workforce, particularly in primary education, can affect students' perceptions and expectations of their own educational roles. Addressing gender-related disparities in education requires attention to teachers' recruitment, training, and retention practices that promote diversity and inclusivity.

The principal is entrusted with the responsibility of improving the quality of administration and instructional activities through effective practices to influence the teachers for improved productivity. These responsibilities are administrative practices carried out by principals to support teachers' job effectively in secondary schools. Principals' administrative practices are the activities performed by principals which improve quality teaching and learning in secondary schools. It involves principals' coordination in checking teachers' day-to-day activities towards enhancing their instructional performance in school. Principals' administrative practice is the primary duty of a principal that helps to guide and improve the physics teachers' effectiveness in disseminating knowledge to the learners during teaching in the classroom.

According to Ndege (2017), administrative practice is the use of expert knowledge and performances to oversee and coordinate the process of improving teaching and learning activities in school. Thus, administrative practice is the skills or tools that a principal acquires and uses to influence the subordinate (teachers) for achievement of educational goals. Principals' administrative practice is very vital in

ensuring that teachers carry out their instructional activities for quality instructional delivery in schools. They enhance instructions with their administrative practices and improve teaching-learning processes in senior secondary schools. Principals' administrative practices are very vital in ensuring that teachers carry out their instructional activities for quality instructional delivery in schools.

Statement of the Problem

The crucial role of principals in ensuring physics teachers' effectiveness and providing efficient administrative performance in schools, previous research perhaps indicated a significant gap in the level of physics teachers' effectiveness. Some of these teachers may be current with new existing pedagogies and utilization of modern instructional resources in ensuring progressive academic development among students. Perhaps ineffectiveness of teachers may be traceable to the administration of the principals. Some principals may not possess the essential performance that is required for the management of schools and this creates an academic limitation on the path of the principals and teachers which may lead to poor academic performance of students. This also raises concerns about the quality of principal administration in public senior secondary schools as well. Some principals may involve teachers in decision making, and allocate improper delegation of duties, disregarding teachers' welfare and providing non-functional instructional materials to teachers. This situation may affect the quality of learning among students and their academic achievement, which will further affect the quality of teaching among teachers of public senior secondary schools in the state at large. It is against these challenges that this study is carried out to critically highlight how principals' administrative performance predicts physics teachers' effectiveness in

public senior secondary schools within Benin Metropolis. The question arises; does principals' administrative performance predict teachers' effectiveness in public senior secondary school? There is limited research on this area of study. Thus, to enhance physics teachers' effectiveness and improve learning outcomes among students in public senior schools in Benin Metropolis, it is essential to conduct further studies on principals' administrative performance.

Purpose of the Study

The purpose of this study, therefore, is to investigate principals' administrative performance as predictor of physics teachers' effectiveness in public senior secondary schools in Benin Metropolis. Specifically, the study seeks to determined:

1. the level of effectiveness of physics teachers in public senior secondary schools in Benin Metropolis;
2. the level of principals' administrative performance in public senior secondary schools in Benin Metropolis;
3. the extent to which principal administrative performance predicts the level of physics teachers' effectiveness in senior secondary schools
4. the extent to which principals' administrative performance predicts physics teachers' effectiveness based on years of service;
5. the extent to which principals' administrative performance predicts teachers' effectiveness based on teachers' qualification; and
6. the extent to which principals' administrative performance predicts teachers' effectiveness based on gender.

Research Questions

The following questions were raised to guide the study:

1. What is the level of effectiveness of physics teachers in public senior secondary schools in Benin Metropolis?
2. What is the level of principals' administrative performance in public senior secondary schools in Benin Metropolis?
3. What is the extent to which principals' administrative performance predicts physics teachers' effectiveness in public senior secondary schools in Benin Metropolis?
4. What is the extent to which principals' administrative performance predicts physics teachers' effectiveness based on years of teaching in public senior secondary schools in Benin Metropolis?
5. What is the extent to which principals' administrative performance predicts physics teachers' effectiveness based on physics teachers' qualification in public senior secondary schools in Benin Metropolis?
6. What is the extent to which principals' administrative performance predicts physics teachers' effectiveness based on gender in public senior secondary schools in Benin Metropolis?

Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance.

1. The level of effectiveness of physics teachers in public senior secondary schools Benin Metropolis is not significant.

2. The level of principals' administrative performance in public senior secondary schools in Benin Metropolis is not significant.
3. Principals' administrative performance is not a significant predictor of physics teachers' effectiveness in public senior secondary schools in Benin Metropolis.
4. Principals' administrative performance is not a significant predictor of physics teachers' effectiveness based on years of teaching performance in public senior secondary schools in Benin Metropolis.
5. Principals' administrative performance is not a significant predictor of physics teachers' effectiveness based on teaching qualification in public senior secondary schools in Benin Metropolis.
6. Principals' administrative performance is not a significant predictor of physics teachers' effectiveness based on gender in public senior secondary schools in Benin Metropolis.

Significance of the Study

This study aim is to provide insights into the principals' administrative performance as predictor of teachers' teaching effectiveness, informing educational planning, policy, and leadership development initiatives in public senior secondary schools in Benin Metropolis. The findings will benefit Government, educational policy makers and planners, principals, teachers training institutions, and researchers in educational leadership and management.

This research will provide useful insights that can assist the government who are the managers of the schools to enforce policies that will ensure that teachers are satisfied. In addition, the study would provide insight on issues of teaching effectiveness

among teachers thus, it would enable school heads to see the need to provide a conducive working environment for the teachers to enhance their teaching profession.

However, educational policy makers and planners, the results of this study will provide valuable insights for policymakers in shaping recruitment, training, and promote policies for school leaders. Evidence-based findings can guide the development of criteria that prioritize performance and competent administrators in leadership positions, ensuring that schools are led by individuals who can positively influence teachers' effectiveness. The study can inform resource allocation, particularly in leadership development programs, succession planning, and capacity-building initiatives designed to improve physics teacher effectiveness and students' achievement.

School administrators and principals stand to benefit from this study by gaining a deeper understanding of how their administrative performance impacts physics teachers' effectiveness. The importance of continuous professional growth, encouraging school leaders to engage in professional development activities that strengthen their instructional leadership skills. Additionally, the findings can help principals design targeted support systems, such as mentorship programs, that motivate teachers and foster a conducive school climate for enhanced teaching and learning outcomes.

Teachers training institutions can utilize the study's findings to improve the content and structure of their leadership and management programs. By incorporating evidence-based practices that link administrative performance to teacher effectiveness,

these institutions can better prepare future school leaders for the demands of educational management. The study also encourages the development of practicum opportunities and mentorship programs, pairing prospective administrators with performance of principals to bridge the gap between theory and practice.

Lastly, this study would form a basis for relevant education data for future research and reference. It will provide a platform for those researchers who are interested in the area to conduct their studies in other organizations that have not been studied. Students, researchers, and scholars may find the study a useful reference for discussion.

Scope of the Study

The scope of this study focuses on how principals' administrative performance, years of experience, teachers' qualifications, and gender differences predicts the effectiveness of physics teachers in public senior secondary schools. Physics teacher's effectiveness is considered in terms of instructional delivery, and professional responsibilities as they relate to the teaching of Physics. This research is limited to public senior secondary schools in Benin Metropolis

Operational Definition of Terms

The following terms were defined operationally as used in the study:

Principal Administrative Performance: Is the level of principal's expertise in managing the school and organization of the school's daily routine ensuring that both teachers' and students are performing their duties

Teachers' Effectiveness: The impact of a teachers' teaching on student learning. It is also a set of attributes and disposition that interact with contextual factor to influence student outcome.

Gender difference: This is the distinctions between male and female teachers as considered in this study. It is used to examine whether being male or female influences teachers' effectiveness in teaching physics.

Teachers' year of service: This refers to the length of time a teacher has spent in the teaching profession.

Teachers Qualification: This refers to the academic and professional certificates obtained by teachers that prepare them for the teaching profession.

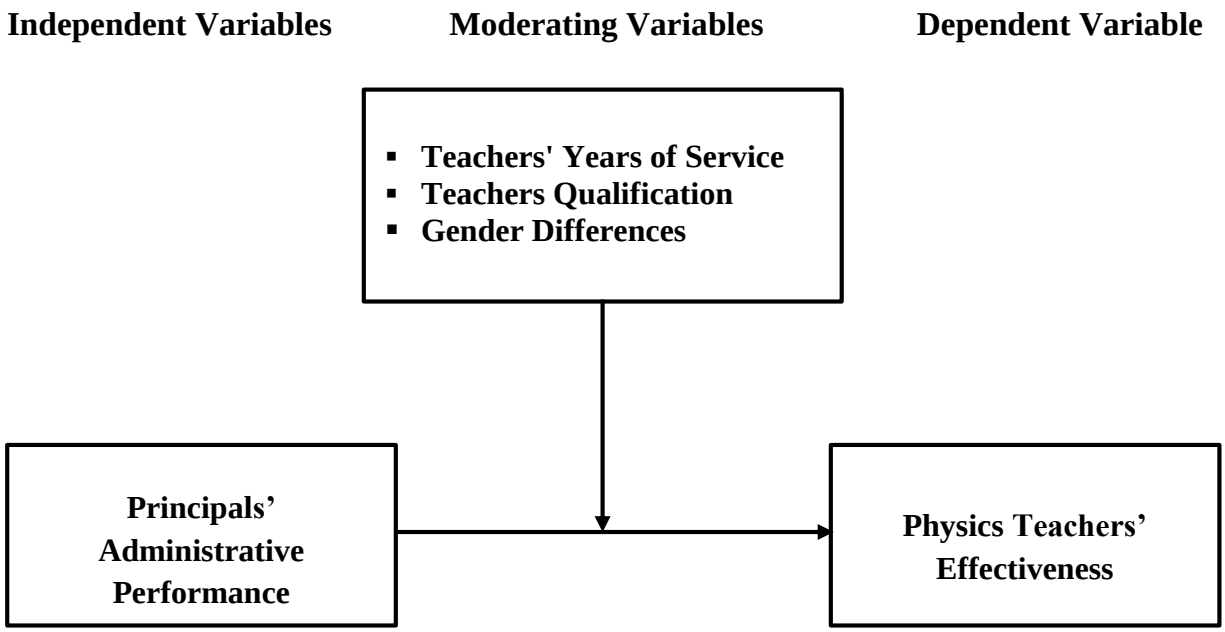
CHAPTER TWO

LITERATURE REVIEW

This chapter focused on the review of related literature relating to principals' administrative performance as predictors of physics teachers' effectiveness. It was carried out under the following headings: Conceptual Framework; Theoretical Framework; and Empirical Review.

Conceptual Framework

The conceptual framework consists of the dependent variable which is teachers' effectiveness and the independent variable which is the principal administrative performance how they affect the performance of the teachers' effectiveness.



Source: Researcher's Concept

The conceptual model shows that a principal's administrative performance can directly influence physics teachers' effectiveness, but this effect is mediated by factors like years of service, and gender differences.

Principal Administration Performance

Principal administration performance refers to the amount of time and practical knowledge a principal has gained in managing and leading a school. This encompasses not just years of service, but also the depth of performance in overseeing school operations, staff, curricula, resources, and policy implementation (Glatthorn, 2020). Principal performance influences their decision-making, leadership style, and the school's organizational climate, all of which can affect teachers' morale, professional growth, consequently, and teachers' effectiveness.

Principals are the key figures in ensuring the smooth operation of schools. Their leadership is essential for creating a productive educational environment. Principal's role goes beyond administrative duties to include encouragement a positive school culture, implementing educational policies, and developing strategies for improving teaching practices (Smith & Ingersoll, 2018). Principals who are skilled at managing school resources, handling personnel, and guiding instructional practices tend to create a better environment for both teachers and students (Leithwood & Louis, 2019). Effective principals can create professional development opportunities, set clear opportunities, and align the school's goals with teaching approaches (Jones, 2021). Administrative performance contributes to a deeper understanding of what teachers' need to thrive. Principals who are performance d in education administration can tailor their leadership to meet these needs by allocating resources efficiently, offering guidance, and promote a collaborative work environment.

An effective principal plays a central role in shaping the culture, climate, and overall success of a school. As the leader of a school, the principal is not only

responsible for managing day-to-day operations but also ensuring that the schools' vision and goals are aligned with the needs of the students, faculty, and community. Effective school leadership goes beyond administrative tasks, as it involves inspiring, guiding, and supporting both teachers and students to foster a positive productive educational environment (Leithwood, Harris, & Hopkins, 2008). Key characteristics of an effective principal include strong instructional leadership, the ability to build positive relationships, effective communication, and a commitment to continuous professional growth.

Another important aspect of an effective principal's role is providing a strong instructional leadership. Research has consistently shown that the principal's involvement in the instructional process is positively correlated with improved students' achievement (Robinson, Lloyd, & Rowe, 2008). An effective principal sets clear academic goals for the school, support teachers' in implementing effective instructional strategies, and provides specialized development opportunities to improve teaching practices. Furthermore, principals who are actively involved in curriculum planning and assessment tend to create a more focused and cohesive learning environment that benefits students' academic performance. They also prioritize data-driven decision-making, using student performance data to inform instructional plan and involvements.

Effective principals also excel in building positive relationships with teachers, students, and the wider school community. These include cultivating trust and respect, offering encouragement and recognition, and demonstrating a genuine interest in the well-being of others. Positive relationships with teachers adopt a collaborative and supportive school culture, where teachers feel valued and are more likely to engage in

their work with enthusiasm and dedication (Duke, 2010). Additionally, when principals actively listen to students and engage with parents, they create a conducive environment where all stakeholders invest in the school's success. These relationships in turn, contribute to greater teachers' retention and students' achievement, as the school becomes a place where teachers feel supported and motivated to perform their duties.

Another crucial characteristic of an effective principal is the ability to communicate effectively. Clear communication ensures that everyone but teachers and students recognise the school's vision, policies, and expectations. Effective principals use communication to motivate staff, clarify goals, and promote a shared sense of purpose. Communication also involves providing regular feedback to teachers and staff, recognizing their achievements, and addressing areas for improvement (Fullan, 2001). An open-door policy, where the principal is approachable and willing to engage in dialogue with staff and students can contribute significantly to a positive school culture and foster a sense of transparency which leads to positive achievements.

Research suggests that the performance level of a principal has a direct correlation with teachers' effectiveness. Principals who have substantial administrative performance are more capable of supporting teachers in their professional development, managing diverse classrooms, and addressing the varying needs of both students and staff (Glatthorn, 2020). They are more skilled in navigating complex educational policies, improving teachers' quality, and setting high standards for academic achievement (Louis & Wahlstrom, 2020). One study by DuFour (2021) revealed that performance d principals are more likely to engage in instructional leadership activities, such as classroom observations, offering constructive feedback, and creating

opportunities for teachers to collaborate on instructional practices. These activities are critical in enhancing teachers' effectiveness because they foster an environment of continuous improvement. Moreover, principals with greater administrative performance tend to be more emotionally intelligent, able to manage conflicts, and resolve issues effectively (Woods, 2019). This results in a school environment where teachers feel supported and motivated to perform at their best, leading to higher levels of teachers' satisfaction and effectiveness.

Principal plays a key significant role in physics teachers' effectiveness. According to (Leithwood and Louis 2019), principals with years of experience tend to adopt transformational leadership styles, which focus on inspiring and motivating teachers empowering them to achieve their full potential. This leadership style has been linked to teachers' motivation, job satisfaction, and overall effectiveness in the classroom (Evans, 2020). On the other hand, principals with limited administrative performance may lead to transactional leadership style, which is often more focused on managing daily tasks and enforcing rules. While this style may be necessary for maintaining order, it does not foster the collaborative, innovative environment that performance principals can create (Woods, 2019). Principals' performance is more likely to engage in sharing decision-making and team building, which leads to a more positive work culture and better teachers' outcomes (Smith & Ingersoll, 2018).

While the positive effects of principal administrative performance on physics teachers' effectiveness are well-documented, principals with less performance may face challenges in creating an environment unconducive to teaching excellence. According to (Evans 2020), performance principals may struggle with managing school crises,

making strategic decisions, and balancing instructional leadership with administrative duties. This can result in a lack of support for teachers', which negatively impacts their effectiveness. Principals with limited performance may also face difficulty in understanding the diverse needs of teachers' and students. This can lead to ineffective allocation of resources, poor professional development initiatives, and a lack of teachers' empowerment (Leithwood & Louis, 2019). However, these challenges can be eased through mentorship and professional development programmes that allow less performance of principals to learn more from experienced counterparts (Jones, 2021).

Principal's administrative performance significantly impacts teachers' effectiveness. Performance of principals tend to provide better leadership, development of school environment where teachers can thrive. Their ability to understand the complexities of school management, engage in instructional leadership, and support teachers' effectiveness is crucial in enhancing teaching outcomes. As schools continue to face various challenges, the performance of principals in directing these challenges will play a fundamental role in shaping teachers' effectiveness and by extension, students' success is sure.

Physics Teacher's Effectiveness

Physics teacher's effectiveness is a critical factor of educational outcomes, encompassing the ability of physics teachers to facilitate students learning, foster engagement, and achieve instructional goals. It is a multidimensional concept that involves not only subject matter expertise but also the capacity to create a supportive and inclusive learning environment. Physics teacher's effectiveness is often measured through a combination of student performance, classroom management, teaching

methods, and the overall impact on student development (Stronge et al., 2018). Understanding this concept is vital for improving educational quality, as it directly influences students' academic success and personal growth. Physics teacher's effectiveness has long been a focal point in educational research, as it plays a significant role in student achievement, motivation, and overall development (Hattie, 2009). The term "physics teachers' effectiveness" broadly refers to the ability of teachers to promote students learning and facilitate an environment conducive to academic and personal growth. Effectiveness is typically assessed through a combination of observable behaviours, student outcomes, and the teachers' ability to adapt to diverse classroom settings. However, it is important to recognize that physics teachers' effectiveness is a multidimensional construct that cannot be wholly defined by a single metric or standardized test scores.

One key aspect of physics teachers' effectiveness is instructional competence, which refers to the physics teachers' ability to deliver content in a way that is understandable and engaging for students. Research has suggested that physics teachers' effectiveness is strongly influenced by teachers' pedagogical skills, knowledge of content, and classroom management techniques. Physics teacher's who are knowledgeable about the subject they teach are more likely to implement effective instructional strategies and engage students meaningfully (Darling-Hammond, 2000). Pedagogical skills, such as the ability to differentiate instruction, are critical in addressing the diverse needs of students, fostering a sense of belonging and engagement. Furthermore, classroom management plays a key role in establishing an orderly and productive learning environment. When physics teachers establish clear

expectations and manage student behaviour effectively, students are better able to focus on learning (Emmer & Sabornie, 2015). Effective physics teachers' employ diverse teaching strategies, adapt to students' learning styles, and use evidence-based practices to ensure that all students achieve their potential. Research by (Hattie 2009) highlights that physics teachers' effectiveness is one of the most significant factors influencing student achievement, surpassing other variables such as class size or school resources. This underscores the importance of investing in teachers' professional development to enhance instructional competence.

Classroom management is another essential component of physics teachers' effectiveness. Effective physics teachers maintain a structured and disciplined environment that is conducive to learning. This involves setting clear expectations, enforcing rules consistently, and addressing behavioural issues promptly. According to Marzano & Marzano (2003), teachers with strong classroom management skills can significantly reduce disruptions, allowing more time for instruction and learning. Furthermore, a well-managed classroom fosters a positive climate where students feel safe, respected, and motivated to participate actively.

The ability to adopt positive relationships with students also plays a crucial role in physics teachers' effectiveness. Physics teachers' who demonstrate empathy, understanding, and genuine care for their students create a supportive environment that encourages academic and emotional growth. According to Pianta et al. (2008), teachers'-student relationships have a profound impact on students' engagement, self-esteem, and overall learning outcomes. Effective physics teachers' build trust and rapport with their students, making them feel valued and motivated to succeed.

Adaptability and continuous improvement are also hallmarks of effective teaching. In a rapidly changing educational landscape, teachers' must be flexible and open to adopting new methods and technologies to enhance learning. Effective physics teachers regularly assess their teaching practices, seek feedback, and participate in professional development programs to stay updated with current trends in education. This commitment to lifelong learning ensures that they can meet the evolving needs of their students and maintain high standards of teaching.

The assessment and evaluation of learning outcomes are integral to physics teachers' effectiveness. Effective physics teachers' use a variety of assessment tools to monitor students' progress, identify areas of improvement, and adjust their teaching methods accordingly. According to (Black and William 1998), formative assessment practices significantly enhance learning by providing timely feedback and helping students understand their strengths and weaknesses. This reflective approach to teaching not only improves student outcomes but also fosters a culture of accountability and excellence. Physics teacher's effectiveness is a multifaceted concept that encompasses instructional competence, classroom management, relationship-building, adaptability, and assessment practices. It is essential in shaping students' academic and personal success, making it a central focus of educational reform efforts. By understanding and enhancing physics teachers' effectiveness, schools can create a foundation for improved learning outcomes and equitable access to quality education.

Beyond these skills, physics teachers' effectiveness is also closely tied to the ability to establish positive relationships with students. A supportive teachers-student relationship can enhance student motivation, self-esteem, and persistence in the face of

academic challenges (Pianta et al., 2008). Research has found that students tend to perform better academically when they perceive their teachers' as caring and responsive to their needs. This aligns with the concept of emotional intelligence, where teachers' who are emotionally attuned to their students can foster a positive classroom atmosphere that enhances learning outcomes (Goleman, 2006).

Additionally, effective physics teachers' exhibit a commitment to continuous professional development. Reflective practice and ongoing learning are integral to improving physics teaching effectiveness (Schön, 1983). Physics teachers' who engage in professional development activities, such as workshops or peer observations, are more likely to stay abreast of new teaching methodologies and educational research, which can positively impact their instructional practices. Furthermore, physics teachers' effectiveness can be enhanced through collaboration with colleagues, as sharing best practices and insight creates a professional learning community that supports growth.

In evaluating physics teachers' effectiveness, it is crucial to consider contextual factors that may impact performance, such as socioeconomic status, school resources, and parental involvement. Although individual teachers' practices are important, a physics teachers' effectiveness cannot be fully isolated from the environment in which they work. Schools with limited resources or a high percentage of students from disadvantaged backgrounds may present unique challenges that impact a teachers' ability to demonstrate effectiveness (Kraft et al., 2018).

Physics Teachers' Years of Service and physics Teaching Effectiveness

The relationship between teacher years of service and their teaching effectiveness is a topic of on-going debate within the field of education. While there is

a general assumption that more performance d teachers are the more effective, they are due to their longer exposure to the classroom, research suggests that the impact of years of service on teaching effectiveness is not always straightforward. Several factors, including teachers' preparation, professional development, and the ability to adapt to changing educational needs, play critical roles in shaping teaching effectiveness (Darling-Hammond, 2000; Rockoff, 2004). This relationship is multifaceted, with both positive and negative aspects depending on the specific context and the individual teachers. The number of years a teacher has spent in service plays a significant role in shaping their teaching effectiveness. Teaching performance often enhances a teachers' ability to manage classrooms, deliver engaging lessons, and adapt to diverse student needs. However, the relationship between years of service and teaching effectiveness is not linear or uniform. While more effective teachers tend to demonstrate certain advantages, this effectiveness can plateau or even decline without continued professional development and motivation (Rice, 2010).

In the early years of a teachers' career, studies may have shown that teachers generally improve significantly in their effectiveness as they gain performance. Teachers typically become more skilled at classroom management, lesson planning, and student engagement in their first few years of teaching (Clotfelter, Ladd, & Vigdor, 2007). As novice teachers accumulate performance, they often refine their instructional techniques, develop a deeper understanding of student needs, and become more adept at differentiating instruction. These improvements can lead to increased student achievement over time. This is supported by findings that show student performance tends to rise as teachers' gain more years of performance, particularly during the first

five years (Rockoff, 2004). The growth in effectiveness in the early stages is often attributed to the accumulation of practical knowledge and the opportunity to reflect on and refine teaching practices. Performance of physics teachers often possess a deep understanding of subject matter and pedagogy, accumulated over years of practice. This expertise allows them to anticipate and address challenges in the classroom more effectively than less performance teachers. Research indicates that teachers' with at least five years of experiences are generally more effective at improving student outcomes than novice teachers' (Kini and Podolsky, 2016). They are better equipped to implement instructional strategies, maintain classroom discipline, and substitute a supportive learning environment, all of which contribute to their overall effectiveness.

One of the significant benefits of years of service is the ability to build a collection of teaching approaches. Performance of teachers' have often tried and tested various approaches, allowing them to select methods that work best for different situations. They also tend to have greater confidence and competence in managing classroom dynamics, addressing behavioural issues, and engaging students actively in learning. Additionally, Performance of teachers are more likely to recognise patterns in student behaviour and learning, enabling them to tailor their instruction to individual needs effectively (Stronge et al., 2018).

Physics teachers with more years of service also benefit from a broader professional network and a better understanding of the educational system. This knowledge allows them to navigate policies, collaborate with colleagues, and access resources that enhance their teaching practices. Moreover, their long tenure often gives them a sense of authority and credibility among students, parents, and colleagues, which

can positively influence their effectiveness. Despite the advantages associated with performance, it is essential to note that teaching effectiveness does not necessarily increase indefinitely with years of service. Some studies suggest that teachers' effectiveness tends to peak after approximately 10 to 15 years of performance (Hanushek & Rivkin, 2006). Without opportunities for professional growth, ongoing training, and motivation, performance of teachers' may become satisfied or resistant to adopting new methods, which can hinder their effectiveness. This showed the importance of continuous professional development to sustain and enhance teaching effectiveness throughout a teachers' career.

The early years of teaching are particularly critical for developing physics teaching effectiveness. Novice teachers' often face challenges in classroom management, instructional delivery, and student engagement, which can affect their confidence and performance. Mentorship and induction programs play a vital role in helping early-career teachers navigate these challenges and develop the skills needed to succeed (Ingersoll & Strong, 2011). With appropriate support, these teachers' can gradually build the performance and expertise required to enhance their effectiveness.

However, at a certain point, the correlation between years of performance and teaching effectiveness becomes less clear. Research proposes that beyond the initial years, the rate of improvement in teaching effectiveness tends to plateau (Harris & Sass, 2007). Performance of teachers continue to improve, but others may stagnate or even decline in effectiveness over time, especially if they do not engage in ongoing professional development. In fact, teachers' who rely solely on their accumulated years of performance without updating their pedagogical practices or adapting to new

educational trends may become less effective. This is particularly relevant in today's rapidly changing educational landscape, where advancements in technology, shifts in curriculum, and evolving student needs require teachers' to be flexible and adaptable. Teachers' who do not embrace these changes may find themselves less effective despite their years of performance.

Moreover, the effects of years of service on physics teaching effectiveness are also influenced by the teachers' attitude toward professional growth. Teachers' who are committed to continuous learning, self-reflection, and professional development are more likely to maintain or even increase their effectiveness over time (Borko, 2004). Conversely, teachers' who fail to engage with ongoing training or who become complacent in their teaching methods may decline in their effectiveness, even with many years of service. Thus, professional development and a growth mindset are essential factors in ensuring that years of service translate into sustained or improved teaching effectiveness.

Another important consideration is the context in which teachers' work. Teachers in schools with strong support systems, resources, and collaborative environments are more likely to performance the benefits of their years of service, as these factors contribute to their professional growth and effectiveness (Darling-Hammond, 2000). Conversely, teachers' working in under-resourced or high-need schools may face greater challenges that impact their ability to remain effective, regardless of their years of performance. For example, teachers in high-poverty schools may encounter significant obstacles such as larger class sizes, less parental involvement,

and limited access to instructional materials, which can hinder their effectiveness (Ingersoll, 2003).

Gender Differences in Teaching Roles and Physics Teaching Effectiveness

Gender differences in teaching roles and physics teaching effectiveness have been a subject of scholarly interest, as gender is often considered an influential factor in shaping teaching styles, classroom management, and interaction with students. While both male and female teachers' can be effective educators, societal expectations, cultural norms, and personal attributes often influence how they approach their teaching roles and impact student outcomes. In many educational systems, gender stereotypes influence the roles that male and female teachers assume. Female teachers are often associated with nurturing and supportive roles, which align with traditional societal views of women as caregivers. As a result, they are frequently found in early childhood education or primary school settings, where such qualities are highly valued. Conversely, male teachers are more likely to be associated with authority and discipline, which are perceived as important in secondary or higher education settings (Drudy, 2021). These stereotypes can shape teachers'-student interactions and the ways in which male and female teachers are perceived by their colleagues, students, and parents. The division of teaching roles by gender also extends to subject areas. Male teachers are often overrepresented in STEM (science, technology, engineering, and mathematics) subjects, while female teachers are more prevalent in language arts and humanities. These patterns may result from societal beliefs about gendered aptitudes, which can influence the effectiveness of teachers in non-traditional subject areas if students hold biases about gender competence in particular disciplines (Else-Quest et al., 2020).

The gender of teachers' can also influence their relationships with students. Research suggests that students often relate differently to male and female teachers with younger students sometimes viewing female teachers as maternal figures and male teachers as authority figures. This dynamic can affect how students respond to instruction, discipline, and support (Martin & Marsh, 2020). For instance, female teachers are more likely to be approached by students with emotional or social concerns, while male teachers' may be sought for mentorship or guidance in extracurricular activities, particularly by male students. Gender congruence between teachers' and students can also play a role in physics teaching effectiveness. Studies have found that students often perform better and feel more comfortable with teachers of the same gender, particularly in gender-segregated classrooms or subjects where gender stereotypes are strong (Dee, 2023). However, this effect is not universal and is mediated by other factors such as teaching quality, classroom environment, and cultural context.

To maximise teaching effectiveness, it is essential to address gender biases and stereotypes that influence teaching roles and perceptions. Schools and policymakers should promote gender equity by encouraging both male and female teachers to participate in all levels of education and subject areas. Professional development programs can help teachers recognise and mitigate gender biases in their teaching practices, ensuring that all students receive equitable and effective instruction. Moreover, fostering a diverse teaching workforce that includes both male and female educators can benefit students by providing them with varied role models. This diversity can help break down gender stereotypes and encourage students to pursue interests and careers in fields traditionally dominated by the opposite gender.

Gender differences in teaching roles and physics teaching effectiveness are shaped by societal expectations, cultural norms, and individual attributes rather than inherent differences in ability. While male and female teachers may approach their roles differently, both can be equally effective when supported by professional development and a positive teaching environment. Addressing gender stereotypes and promoting diversity in the teaching profession are essential for fostering equitable education and maximising physics teaching effectiveness.

Teachers' Qualification and Physics Teachers' Effectiveness

The relationship between teachers' qualifications and physics teachers' effectiveness is a topic of great interest in the field of education, particularly in discussions around improving learning outcomes and school performance. Teachers' qualifications generally refer to their academic degrees, professional certifications, and training, while physics teacher effectiveness typically relates to their ability to improve student achievement, manage classrooms, and foster a positive learning environment. A growing body of research indicates a strong, positive correlation between higher teacher qualifications and greater effectiveness in the classroom. Highly qualified teachers are often better equipped with subject matter knowledge and pedagogical skills, which directly impact their teaching quality. For instance, teachers who have completed advanced degrees in education or specific content areas tend to use more effective instructional strategies, leading to better student understanding and engagement (Kini & Podolsky, 2016). Moreover, the completion of professional development programs and ongoing training equips teachers with modern instructional

techniques and classroom management strategies, further enhancing their effectiveness (Darling-Hammond et al., 2017).

Another important dimension of qualification is certification. Certified teachers generally outperform non-certified ones in promoting student achievement. Studies show that certification programs provide essential training in curriculum development, assessment strategies, and teaching methodologies that contribute to better classroom performance (Goldhaber et al., 2019). Additionally, teachers with specialized training in handling diverse learners, including students with special needs, are more effective in inclusive classrooms (Lindsay et al., 2020).

Performance, while not a formal qualification, also plays a crucial role in physics teacher effectiveness. Early-career teachers often improve significantly in their first few years on the job, suggesting that both initial qualification and continuous professional development are key to improving effectiveness over time (Papay & Kraft, 2015). However, performance alone without ongoing training may not sustain effectiveness, emphasising the importance of lifelong learning for educators. Teachers' academic qualifications have been shown to significantly influence student performance in core subjects such as mathematics and science. For example, a study by Blazar (2018) found that students taught by teachers with strong content knowledge and pedagogical preparation showed significantly higher gains in mathematics. This underlines the necessity for rigorous teacher preparation programs and subject-specific training.

However, it is important to note that while teacher qualifications are crucial, they are not the sole determinant of effectiveness. Other factors such as school leadership, student motivation, class size, and resource availability also play important roles in

shaping teaching outcomes (OECD, 2018). Nevertheless, investing in teacher qualification remains one of the most direct and impactful strategies for enhancing educational quality.

Theoretical Framework

The theoretical framework for this study is based upon the Theory of Transformational leadership and Contingency Theory of Leadership.

Theory of Transformational leadership

The Theory of Transformational Leadership, introduced by James MacGregor Burns in 1978 and further developed by Bernard Bass, focuses on how leaders can inspire and motivate followers to achieve higher levels of performance and personal growth. Transformational leadership is centered on the idea that leaders can create positive changes in both their followers and organisations by fostering an environment of trust, enthusiasm, and vision.

Transformational leadership is a leadership style that emphasizes inspiring and motivating followers to achieve their fullest potential and exceed their self-interests for the good of the organisation or society. This theory, first introduced by James MacGregor Burns in 1978 and later expanded by Bernard Bass in the 1980s, focuses on leaders who are able to create significant change by influencing their followers' values, beliefs, and behaviours. The transformational leader is not merely concerned with maintaining the status quo but strives to elevate both the individual and the organisation to new levels of performance and ethical standards (Bass, 1985; Burns, 1978). One of the central tenets of transformational leadership is the ability to provide a clear vision

and a sense of purpose. Transformational leaders engage with followers on an emotional level, appealing to their higher ideals and values. These leaders are seen as role models who inspire loyalty, trust, and admiration, leading by example rather than by command.

This is often achieved through four key components: Idealised Influence, Inspirational Motivation, Intellectual Stimulation, and Individualised Consideration (Bass & Avolio, 1994).

Idealised Influence: refers to the leader's ability to serve as a role model for followers. Transformational leaders act in ways that are ethically sound, demonstrating high moral standards that inspire admiration and respect. They are seen as charismatic figures whose behaviours reflect integrity and commitment, which increases their influence over their followers (Bass, 1990).

Inspirational Motivation: involves articulating a clear, compelling vision of the future that excites and motivates followers. Transformational leaders help their followers understand how their individual efforts contribute to a larger mission or purpose. This sense of shared vision and collective effort fosters a high level of engagement and commitment to organisational goals (Bass, 1990; Northouse, 2018).

Intellectual Stimulation: refers to the leader's encouragement of creativity, innovation, and problem-solving. Rather than simply dictating solutions, transformational leaders encourage followers to think critically, challenge assumptions, and explore new ideas. This aspect of transformational leadership promotes an environment of continuous learning and growth, empowering followers to take

ownership of their work and find new ways to improve (Bass & Avolio, 1994; Avolio & Bass, 2004).

Individualised Consideration: is the leader's focus on the development of each follower's potential. Transformational leaders are attentive to the needs of their followers, providing mentorship, coaching, and support. They take the time to recognise each person's unique contributions and offer personalised development opportunities that help followers achieve their personal and professional goals. This individual attention fosters a sense of empowerment and self-worth among followers, contributing to their overall performance and satisfaction (Bass & Avolio, 1994; Avolio & Bass, 2004).

The impact of transformational leadership extends beyond individual followers to the entire organisation. Studies have shown that organisations led by transformational leaders often exhibit higher levels of innovation, employee satisfaction, and overall performance (Bass & Riggio, 2006). Transformational leadership fosters a positive organisational culture where collaboration, trust, and continuous improvement are central values. The leadership style also promotes a sense of commitment to organisational goals, reducing turnover rates and increasing retention of talented employees (Bass, 1999).

Furthermore, transformational leadership has been linked to the development of leadership at all levels of an organisation. By empowering followers to take on leadership roles, transformational leaders help cultivate a pipeline of future leaders, ensuring the long-term success and sustainability of the organisation (Avolio, Walumbwa, & Weber, 2009).

Transformational leadership is a powerful approach to leadership that focuses on inspiring and empowering followers to achieve personal and organisational growth. By fostering a vision of change, encouraging creativity and innovation, and providing individualised support, transformational leaders create environments that promote both personal development and organisational success. This leadership style is particularly effective in dynamic, rapidly changing environments where adaptability, creativity, and engagement are crucial to achieving long-term goals (Bass & Riggio, 2006; Northouse, 2018).

Contingency Theory of Leadership

The Contingency Theory of Leadership, developed by Fred Fiedler in the 1960s, proposes that there is no single best way to lead an organisation or group. Instead, the effectiveness of a leader's style depends on the specific situation they are facing. The theory suggests that a leader's behaviour and effectiveness are contingent on the match between their leadership style and the situational variables in the environment. Fiedler's contingency model, which is one of the most widely recognised frameworks, emphasises that the best leadership style is determined by the situation, and leadership effectiveness is the result of both the leader's traits and the situational context (Fiedler, 1964; Fiedler, 1967).

At the heart of the Contingency Theory is the concept that leaders have different leadership styles that may or may not be suited to certain situations. Fiedler classified leaders into two basic categories: task-oriented leaders and relationship-oriented leaders. Task-oriented leaders focus primarily on the completion of tasks, setting clear goals, and organising work to achieve those goals. They are concerned with efficiency,

structure, and ensuring that performance standards are met. On the other hand, relationship-oriented leaders are more concerned with building interpersonal relationships, fostering trust, and maintaining positive group dynamics (Fiedler, 1964).

Fiedler's model is based on the idea that a leader's effectiveness is largely determined by how well their leadership style matches the specific situation. He introduced the Least Preferred Co-worker (LPC) scale as a tool to determine a leader's style. Leaders who rate their least preferred co-worker highly (i.e., they are more relationship-oriented) are classified as relationship-oriented, while those who rate their least preferred co-worker poorly (i.e., they are more task-oriented) are classified as task-oriented. Fiedler posited that task-oriented leaders are most effective in highly favourable or highly unfavourable situations, while relationship-oriented leaders excel in moderately favourable situations (Fiedler, 1964).

Fiedler's theory further suggests that three critical situational factors determine the degree of favourability of a leadership situation: leader-member relations, task structure, and leader's position power. Leader-member relations refer to the degree of trust, respect, and confidence between the leader and the group members. Strong leader-member relations make it easier for the leader to influence followers (Fiedler, 1964). Task structure refers to the clarity of the task and whether it is well-defined or ambiguous. Well-structured tasks are easier to direct, as the objectives and methods are clearly outlined. Leader's position power refers to the formal authority a leader has to reward or punish followers. Leaders with strong position power have more control over the outcome of tasks and can use their authority to influence performance (Fiedler, 1967).

According to Fiedler, leadership effectiveness is contingent on the interaction between these situational factors and the leader's style. When the situational conditions match the leader's strengths, they are more likely to be effective. For example, task-oriented leaders tend to perform better in situations where the task is clear and the leader has strong control over the group. Conversely, relationship-oriented leaders perform best when the task is more ambiguous, and the leader needs to focus on maintaining a positive group dynamic (Fiedler, 1964; Fiedler, 1967).

While the Contingency Theory of Leadership has provided significant insights into the relationship between leadership style and situational variables, it has also faced some criticism. One of the primary criticisms is the rigid categorisation of leadership styles. Some critics argue that Fiedler's model oversimplifies leadership, as many leaders exhibit a combination of both task-oriented and relationship-oriented behaviours depending on the situation. Furthermore, the LPC scale has been critiqued for its reliability and validity as a tool to measure leadership style, with some researchers questioning whether the scale truly captures the complexity of leadership behaviour (Schriesheim, 1979).

Despite these criticisms, the theory has influenced later leadership research, particularly in the development of Situational Leadership Theory by Paul Hersey and Ken Blanchard, which builds on the contingency model but proposes that leaders can adjust their style to the maturity or readiness level of followers. Similarly, the Path-Goal Theory, developed by Robert House, also integrates elements of contingency thinking, emphasising the leader’s role in clearing obstacles and guiding followers toward their goals based on the situational context (Hersey & Blanchard, 1982; House, 1971).

The Contingency Theory of Leadership provides a framework for understanding the complex relationship between leadership style and situational factors. By recognising that the effectiveness of a leader depends on the specific conditions in which they operate, Fiedler's theory has helped to shift the focus of leadership research away from the idea of a "one-size-fits-all" approach. The theory underscores the importance of matching leadership behaviours with situational variables, making it a valuable tool for both leaders and organisations seeking to optimise performance and effectiveness. Despite its limitations, the Contingency Theory remains a foundational concept in the study of leadership, highlighting the importance of adaptability and situational awareness in leadership practices (Fiedler, 1964; Hersey & Blanchard, 1982).

Empirical Review

Principal Administrative Performance

Oguejiofor, Chidumebi Ngozi (2023), investigated principals' administrative practices as predictors of teachers' job performance in public secondary schools in Enugu State. Three research questions and three null hypotheses guided the study. The study adopted a correlational survey design. The population of the study comprised 8764 teachers in 268 secondary schools in Enugu State. A sample size of 605 teachers was drawn using proportionate stratified random sampling technique representing 6.9% of the population. The instruments used for data collection were Principals' Administrative Practices Questionnaire (PAPQ) and Teachers' Job Performance Questionnaire (TJPQ). The instruments were validated and the reliability determined at 0.71, 0.83, 0.80 for principals' administrative practices and 0.85 for teachers' job

performance. Linear regression analysis was used to answer the research questions, while t-test associated with linear regression was used to test the hypotheses at a 0.05 level of significance. The findings revealed that, there is a very high and positive predictive power of principals' administrative practice on delegating duties to staff on teachers'' job performance in secondary schools in Enugu State. The findings equally revealed that, there is a very high and positive predictive power of principals' administrative communication network on teachers' job performance in secondary schools in Enugu State. The findings further revealed that, there is a very high and positive predictive power of principals' administrative practice of managing staff welfare on teachers' job performance in secondary schools in Enugu State. Based on the findings of this study, the researcher recommended that, Principals should adopt the administrative practice of delegating duties to teachers for improved job performance and productivity in secondary schools in Enugu State.

Akinnubi, Owonwami and Olaiya (2024) carried out a study titled Principals' administrative skills in public senior secondary schools: A case of Ilorin, Nigeria. This study investigated principals' administrative skills implementation in public senior secondary schools in Ilorin Metropolis of Kwara State on the indicators of principals' financial and physical facilities maintenance and interpersonal relationship skills. The study adopted a descriptive survey. One hundred teachers were randomly selected from public senior secondary schools in Ilorin Metropolis as a sample. The researcher instrument titled Assessment of Principals' Administrative Skills Questionnaire (APASQ) was used for data collection. Two research questions were raised and answered to guide the conduct of the study. Descriptive statistics were used to answer

the research questions raised. Findings showed that 28.8% constituted the majority of the respondents who agreed that principals had financial skills in Ilorin Metropolis. Results indicated that 45.6% constituted the majority of the respondents who strongly agreed that principals had physical facilities maintenance skills. It was shown that 42% constituted the majority of the respondents who strongly agreed that their principals had interpersonal relationship skills. Findings revealed that 68% constituted the majority who agreed that the level of principals' administrative skills in public senior secondary schools in Ilorin Metropolis was high. It was recommended among others that principals endeavour to keep a high level of professional spirit and good moral standards in the schools to adopt their administrative skills to sustain a good working environment for teachers' and other staff in their schools.

Ogundele, Sambo and Bwoi (2015) carried out a study on Principals' Administrative Skills for Secondary Schools in Plateau State, Nigeria. This study investigated the necessary skills needed by principals in the effective administration of schools at secondary school level. The issue of poor academic performance of students in Nigeria could be attributed to poor administrative skills of school administrators. The poor performance was however, as a result of the multi-faceted problems facing the system in Nigeria such as: inadequate funding; inadequate facilities; low morale of teachers'; poor supervision of schools and frequent changes in educational policies. The roles of the principal in meeting these challenges were examined as the chief executive who manages the school finance and who can use his ingenuity to raise fund to complement government's efforts; a motivator and a change facilitator. This study was carried out in some selected schools in Jos North Local Government in Plateau state.

Principal Administrative Skills Survey Questionnaire (PASSQ) was used to obtain information. Some of the recommendations include: The modern-day school principals should be knowledgeable, professionally and administratively competent. Government should make provision for sponsoring principals and organising conferences for them to serve as a means for professional growth as well as incentives to the principals; Principals must define objectives with teachers as teachers would be committed in their job to ensure that the objectives are achieved as they participated in deciding the objectives.

Olufunmilola Edith and Olabisi Mabel Akinleye (2020), carried out study on Principal administrative Challenges and teachers' effectiveness in secondary schools in Ekiti State. The study specifically examined the extent to which principals' administrative challenges have hindered teachers' 'effectiveness. It also investigated the level of teachers' effectiveness. The study adopted the descriptive research design of the survey type. The population of the study comprised all the 203 principals and 7,538 teachers in 203 secondary schools in Ekiti state. The sample consisted 30 principals and 300 teachers' drawn from 30 public secondary schools in Ekiti state using multi-stage sampling procedure. Two sets of instruments tagged 'principals Administrative challenges Questionnaire (PACQ)" and Physics Teachers' effectiveness questionnaire (TEQ)" were used for the study. The two instruments were validated by experts in Educational Management and Test and Management to determine the appropriateness in order to ensure the face and content validity. The test-retest method of reliability coefficients of 0.82 and 0.80 were obtained respectively. The research question and percentage scores why Pearson Product Moment Correlation was used to

test the hypothesis. The findings showed that the level of principals' administrative challenges in Ekiti State was moderate and the level of teachers' effectiveness in Ektit state was low. There was a significant relationship between principals' administrative challenges and teachers' effectiveness. It was therefore recommended that the government should ensure adequate funding for secondary schools as and when due and provision of other incentives for smooth running of the school administrative.

Teachers' Years of Service and Physics Teachers' Effectiveness

Adesina, Raimi, Bolaji and Adesina (2016) carried out a study on Teachers' attitude, years of teaching performance and self-efficacy as determinants of teachers' productivity in teachers' professional development programme in Ibadan Metropolis, Oyo State, Nigeria. The output of such TPDP impinges on several factors thus this study aimed at determining the effects of selected teachers' variables on primary school teachers' productivity in TPDP cluster meetings in Oyo State, Nigeria. A descriptive type of survey design was adopted for the study. 350 (M = 39; F = 311) primary school teachers in Ibadan metropolis were purposively sampled for the study, using three instruments: Teachers' Attitude to Teaching (r = .83); Teachers' Self-efficacy (r = .68) Scales and Teachers' Productivity Checklist (r = .91). Pearson Product Moment Correlation and Multiple regression were used for data analysis. The results indicated strong relationship between teachers' attitude (r = .86; p<.05) years of teaching Performance (r = .69; p<.05); teaching self-efficacy (r = .79; p<.05) and teachers' productivity in PTDP cluster meetings. The predictor variables jointly contributed 43% (F2,349) = 17.508; R = .66; R2 = .43; p<.05) to teachers' productivity. Therefore, it was recommended among others that teachers of different years of teaching Performance s

should be selected for TPDP and prompt incentives as token economy given to stimulate the participants' positive attitude and self-efficacy towards the programme productivity.

Yusufu, Utulu and Achor (2021) investigated teachers' characteristics as determinant of their professional competence in Social Studies among private and public secondary schools in Kogi East Education Zone in Kogi State, Nigeria. Four research questions and four null hypotheses formulated to guide the study. The study adopted correlational survey research design. The population comprised 3957 Upper Basic Social Studies teachers from 1937 Universal Basic Education schools in Kogi East Education Zone for 2019/2020 academic session. A sample of 980 Social Studies teachers from 87 upper basic schools in 15 Local Government Areas within the three Education Zones of Kogi State was used for the study. The instrument used for data collection is Social Studies Teachers' Competency Scale (SSTCS) with reliability coefficient of 0.88. The data collected were analyzed using multiple regression analysis to answer the research questions while analysis of variance (ANOVA) was used to test the null hypotheses at 0.05 level of significance. It was found that that Social Studies teachers' qualification and years of Performance have significant contributions to their professional competence in public secondary schools. It was also found that Social Studies teachers' qualification and years of Performance had significant contributions to their professional competence in private secondary schools. It was recommended among others that the State Ministry of Education should employ only teachers' that are professionally qualified and certified to teach Social Studies. This may clarify the assumption that anybody can be a teacher of Social Studies and encourage the training and certification of Social Studies teachers.

Yusuf and Dada (2016) carried out a study that examined the impact of teachers' qualification and Performance on students' performance in Colleges of Education in Kaduna State, Nigeria. Two Colleges of Education in Kaduna state were used for the study. A total of twenty (20) teachers' and one hundred (100) students were randomly selected from the two Colleges of Education. The data was collected using questionnaire and students' test scores. Data was analyzed using frequency counts, percentages and t-test. The results revealed that a significant difference existed in the performance of students taught English language by professional teachers. The study recommended among others, that only qualified and performance of teachers should be allowed to teach in Colleges of Education in Kaduna state, Nigeria. All non-professional and unqualified teachers should be encouraged to pursue their post graduate studies (such as Post Graduate Diploma in Education, Master's and Doctoral degrees in Education) on a part-time or full-time basis. This will help to improve the quality of their teaching and consequently improve the performance of students and the quality of teachers' education in Nigeria.

Gender Differences in Teaching Roles

Nnubia, Ibeanu and Okechukwu (2024) carried out a study titled, Gender role shift: implications for balancing work and family responsibilities among female primary school teachers in Nigeria. This cross-sectional survey of 1498 married female primary school teachers in Enugu state, Nigeria was used to investigate the association between work-family conflict and shifted gender roles. Gender role shift was measured as female breadwinning and shared house chores roles with husband/partner. Pre-validated work and family conflict scale, and a structured questionnaire were used for data collection.

Cronbach's alpha reliability coefficients of the instruments were 0.913 and 0.871 respectively. Data were analysed using IBM-SPSS version 23, using percentage and listwise binary logistic regression. The results showed that 37.2% of the women were family breadwinners and 18.2% reported that they shared house chores with their husbands/partners. Work-family conflict was found to be 21.6% prevalent. Being a breadwinner increased the odds (OR > 1.00) of work-family conflict, while shared responsibility for household chores decreased the odds (OR < 1.00) of work-family conflict. Breadwinners had higher odds (OR = 4.77; CI = 2.61 - 8.73) of work-family conflict than non-breadwinners. Women whose partners shared in-house chores were less likely (OR = 0.31; CI = 0.20- 0.51) to performance conflict. Gender role shift, therefore, has implications for work-family imbalances among women in the primary school teaching profession in Nigeria.

Thompson and Unachukwu (2021) carried out a study that investigated gender differences on the relationship between school organisational culture and teachers' task performance in public secondary schools in Anambra State. It adopted a correlation survey research design. Two research questions guided the study and two hypotheses were tested at 0.05 level of significance. Out of a population of 6,396 teachers' (comprising 1,045 males and 5,351 females) in the 261 public secondary schools in the State, a sample of 1,280 respondents comprising 209 male teachers' and 1,071 female teachers from the six educational zones in the State was used for the study. The sample was composed using multi-stage sampling procedure which included proportionate stratified and simple random sampling techniques. Stratification was based on gender. Two researchers developed instruments namely School Organisational Culture

Questionnaire (SOCQ) and Teachers' Task Performance Questionnaire (TTPQ) were used for data collection. The instruments were validated by experts. The Cronbach's Alpha statistics was used to determine the internal consistency of the instruments and this yielded co-efficient values of 0.80 and 0.70 for the two instruments respectively. The researcher with the aid of three research assistants administered a total of 1,280 copies of each of the questionnaires on the respondents. Out of this number, 1,256 copies representing 98% were completed, successfully retrieved and used for data analysis. Data relating to both the research questions and hypotheses were analysed using Pearson Product Moment Correlation Coefficient. The results of the findings include that there is a significant low positive relationship between male and female teachers perceived school organisational culture and their task performance in public secondary schools in Anambra State. Based on the findings, it was recommended among others that the management of public secondary schools in Anambra State should encourage teachers to practice those organisational cultures that are seen as positive and which can lead to improved teachers' task performance. Such cultures include the collegial and role culture. Implications of the study were drawn and conclusions made.

Ayodeji (2010) carried out a study titled Gender-Stereotypes Belief and Practices in the Classroom: The Nigerian Post-Primary School Teachers'. This study explores the gender-stereotyped beliefs and perception of secondary school teachers in classroom practices. A total of 250 teachers participated in this study. A self-administered questionnaire was used to generate responses from teachers' on how gender-stereotypes are played out in their classroom practices. Data were analysed using descriptive

statistics, one-way ANOVA and t-test. Results indicate that most of the teachers' surveyed directly or indirectly promote gender-stereotypes. However, ANOVA test revealed no statistically significant difference between some demographic variables and the three aspects. From these findings, it is recommended that teachers' education curricula for both preserve and in-service must be permeated with opportunities to acquire gender sensitivity knowledge, skills and develop attitudes in classroom layout, use of resources, responsibilities for activities, discipline, classroom language and teachers' students' interaction. In addition, Federal and States Ministries of Education need to develop textbooks and materials, establish mechanisms to monitor and evaluate education policy implementation from a gender equality perspective.

Physics teachers' effectiveness and teachers' qualification

Onyekuru (2013) carried out investigated on physics teaching effectiveness of secondary school teachers' in Emohua Local Government Area. A sample of 80 secondary school teachers from secondary schools in Emohua Local Government Area of Rivers State was involved in the study. Four research questions were answered and three hypotheses tested at 0.05 level of significance. The instrument for data collection was Physics Teachers' Effectiveness Checklist, a 29-item instrument which was validated by three experts in the field of Measurement and Evaluation. Its reliability index as determined through test-retest method and Pearson product moment correlation technique was 0.88. The generated data were subjected to SPSS analysis using mean and standard deviation as statistical tools for research questions, and student's-test for hypotheses. It was found that; (1) teaching effectiveness of teachers from secondary schools in Emohua Local Government Area was below average (2) of

the variables investigated, teaching performance and teachers' qualifications had a significant influence on teaching effectiveness of the secondary school teachers' while gender had no significant influence. Based on these findings, it was recommended that only qualified and performance of teachers should be recruited to teach in secondary schools located in Emohua Local Government Area. Besides, in-service training should be conducted for teachers to improve on their efficiency or effectiveness in discharge of their duties.

Usifo (2023), investigated the impact of teachers‟ teaching experiences and qualifications on effective job performance in public secondary schools in Bayelsa State. Two research questions and two null hypotheses were formulated to guide the study. The study adopted both descriptive and correlational research designs. The population of the study comprised 3,862 teachers in public secondary schools in Bayelsa State. The sample size of the study was 386 teachers using the simple random sampling technique. The respondents were drawn from the 8 Local Government Area in Bayelsa State representing 50% of the population through stratified random sampling technique Two instruments were used in collecting data for the study; tagged "Teachers Teaching Experience and Qualification Questionnaire (TTEQQ)" and "Teachers‟ Job Performance Questionnaire (TJPQ)". The instruments were developed by the researcher. The instruments were validated by experts in Educational Management. The comments were incorporated in modifying the instruments. Cronbach Alpha method was used in determining the reliability of the instruments. The Teachers Teaching Experience and Qualification (TTEQQ) yielded a reliability of .888 while the Teachers‟ Job Performance Questionnaire (TJPQ) yielded a reliability

coefficient of .842 indicating that the instruments were quite reliable for use in the study. Mean and standard deviation was used in answering the research questions while Pearson Product Moment Correlation method was used in testing the null hypotheses at .05 level of probability. The result of the study showed that: teachers‟ teaching experience and qualifications influences to a great extent their job performance. Based on the results of the study, it was recommended among other that teachers should further develop their teaching experience and improve on their qualification that builds their capacity competence and creativity in the performance of their teaching obligations for effective job performance. School administrators should make the working environment conducive for teachers to adopt and improve themselves professionally and teachers should develop their professional experiences towards their teaching effectiveness.

Obeka (2024), examined the influence of teacher's qualification on students' achievement in English language at the upper basic education level in Ebonyi state, Nigeria. Students' achievement in English language was examined. Most secondary schools in Nigeria have recorded mass failure in English language in the West African School Certificate examination. The study utilized the co-relational design. One research question and one null hypothesis guided the study. The population of the study consisted 1600 teachers of English language and 28000 students. Through the simple random sampling technique, a sample size of 540 respondents was selected for the study. Instrument for data collection was a structured questionnaire. Data collected were analyzed using descriptive statistics of mean and standard deviation to answer the research questions while regression was used to test the hypothesis. Result of the

findings showed that there is a significant relationship between teachers' qualification and students' achievement in English language. Based on this, one of the recommendations is that the government should employ only professionally trained English language teachers to teach English language at the upper basic level of education.

Summary of Literature Review

The literature reviewed in this study covered the conceptual framework, which includes the principal administration performance, physics teacher effectiveness, teacher professional training and teaching effectiveness, teachers' years of service and physics teaching effectiveness, gender differences in teaching roles and teaching effectiveness, leadership styles and teaching effectiveness. The literature reveals a clear link between a principal's administrative performance and improved teacher effectiveness. Principals with more performance tend to exhibit stronger leadership skills, which in turn positively affect teacher motivation, professional development, and instructional quality. However, the relationship between performance and effectiveness is mediated by factors such as leadership style, school context, and the principal's ability to adapt to changing educational demands. For schools to benefit from the full potential of performance of leadership, principals must receive continuous professional development and support to enhance their ability to lead effectively.

The theoretical framework for this study is based upon the Theory of Transformational leadership and Contingency Theory of Leadership. The Theory of Transformational Leadership, introduced by James MacGregor Burns in 1978 and further developed by Bernard Bass, focuses on how leaders can inspire and motivate

followers to achieve higher levels of performance and personal growth. Transformational leadership is centered on the idea that leaders can create positive changes in both their followers and organisations by fostering an environment of trust, enthusiasm, and vision. The Contingency Theory of Leadership, developed by Fred Fiedler in the 1960s, proposes that there is no single best way to lead an organisation or group. Instead, the effectiveness of a leader's style depends on the specific situation they are facing. The theory suggests that a leader's behaviour and effectiveness are contingent on the match between their leadership style and the situational variables in the environment. Fiedler's contingency model, which is one of the most widely recognised frameworks, emphasises that the best leadership style is determined by the situation, and leadership effectiveness is the result of both the leader's traits and the situational context (Fiedler, 1964; Fiedler, 1967).

Finally, this chapter emphasised reviews of related empirical studies of some authors and researchers on some topics that are related to the topics under review which could further clarify and give clear picture of the several explanations of the topic under review in a more comprehensible manner that will be useful to this study has been examined in the findings of their work. However, there appears to be a significant gap in the literature regarding principal's administrative performance as predictor of teachers' effectiveness in senior secondary schools in Edo State, Nigeria. Therefore, it is believed that at the end of this research, it will contribute to the existing body of knowledge and also fill the existing knowledge gap.

CHAPTER THREE

METHODOLOGY

The procedure that was adopted in carrying out this study is presented under the research design, population of the study, sample and sampling technique, research instrument, validity of the instrument, reliability of the instrument, method of data collection and method of data analysis.

Research Design

This study employed correlation survey design. The design shows the connection between two variables, the independent and dependent variables. This design is considered appropriate because the study described how principals' administrative performance correlates with teachers' teaching effectiveness. Correlation survey design was ideal for capturing and describing these characteristics in a large sample.

Population of the Study

The population of the study comprised 2,500 respondents. This was made up of 188 Science teachers and 47 principals and 2,265 SS3 science students drawn from 3 Local Government Areas in Benin metropolis of Edo State. The Benin Metropolis has three (3) Local Government Areas with forty-seven (47) Public senior Secondary Schools in the metropolis. The population size is presented in Appendix D.

Sample and Sampling technique

The sample size of this study comprised Two hundred and fifty (250) respondents, that is, 10% of the entire population. This includes 15 principals, 45 science teachers and 190 science students drawn from 15 selected secondary schools

from the 3 Local Government Areas in Benin Metropolis. These numbers were selected using stratified simple technique. This technique was employed to ensure adequate representation of the population from the three Local Government Areas for this study as shown in appendix E.

Research Instrument

The study employed questionnaires as the research instrument titled "Principals Administrative Performance as Predictor of Teachers' Effectiveness: questionnaire (PAEPTE)". This questionnaire was divided into two sections. Section A consists of items requesting the respondents' bio- data while section B consists of thirty (30) items designed to elicit data on principal administrative performance as predictor of teachers' effectiveness in Benin Metropolis in Benin City on a five-point Likert Scale of 5 = Very High (VH), 4 = High (H), 3 = Moderate (M), 2 = Low (L), 1 = Very Low (VL).

Validity of the Instrument

To ascertain the validity of the instrument, the questionnaire was vetted by three experts; one in Measurement and Evaluation and two in Administration and Planning in the Department of Education, Benson Idahosa University, Benin City. All corrections and suggestions made were incorporated into the final draft of the instrument which was approved by the supervisor.

Reliability of the Instrument

The reliability of the instruments was determined by the internal consistency method. This was done by administering the questionnaires on thirty (30) senior secondary school physics teachers' and thirty (30) senior secondary school science

students that were not part of sample for the study. The data collected was analyzed using Chronbach Alpha statistics and reliability coefficient of .827 and .770 were obtained respectively, which is an indication of a good and reliable Instrument.

Method of Data Collection

The researcher obtained a letter of introduction from the Department of Education to the respective schools. This enabled the researcher carry out the research work bearing in mind, the need to get the approval of the school headship (principal) and the cordial attention of staff. The researcher, with the help of Research Assistants administered the questionnaires on the respondents and asked them to fill the questionnaires and return same to the researcher immediately.

Method of Data Analysis

The Descriptive statistics of mean, standard deviation and percentage, and regression statistics were used to answer the research questions and test the hypotheses at .05 level of significance.

CHAPTER FOUR

ANALYSIS OF DATA AND PRESENTATION OF RESULTS

In this chapter the summary of the analysis of the data collected from the respondents drawn from the area of study is presented. The results are presented in relation to the research questions and the hypotheses stated in chapter one. These are as follows:

Research Question 1

What is the level of effectiveness of physics teachers in public senior secondary schools in Benin Metropolis?

The summary of the descriptive statistics of the level of effectiveness of physics teachers in public secondary schools in Benin Metropolis is presented in table 1

Table 1: Descriptive Statistics of the Obtained Level of Effectiveness of Physics Teachers on a 5 – Point Scale in Public Senior Secondary Schools in Benin Metropolis

SN		SUM	Mean	SD	Percent	Remark
1	Punctuality	708	4.48	.949	90%	High
2	Dressing	651	4.12	1.03	82%	High
3	Knowledge of the subject	679	4.30	.878	86%	High
4	Teaching competence	662	4.19	.925	84%	High
5	Use of English	610	3.86	1.13	77%	High
6	Objective setting	587	3.72	1.31	74%	High
7	Use of audio-visual	498	3.15	1.28	63%	Moderate
8	Use of chalk-board	581	3.68	1.41	74%	High
9	Class control	627	3.97	1.29	79%	High
10	Lesson note preparation	668	4.23	1.00	85%	High
11	Use of question in teaching	676	4.28	1.00	86%	High
12	Blackboard summary	627	3.97	1.34	79%	High
	Aggregate	**631.1667**	**3.9958**	**.36014**	**80%**	**High**

Table 1 statistics showed that the mean level of the effectiveness of the physics teachers in public secondary schools in Benin Metropolis is approximately 4.00 in a 5 – point scale with an overall mean effectiveness of 80%. The standard deviation from the aggregate mean score is .36014. The overall effectiveness ranges from 63% to 90%. Thus, the effectiveness of all the indicators was considered high except in the use of the audio-visual materials which was considered as moderately effective the overall mean effectiveness of physics teachers in public secondary schools in Benin Metropolis was considered high being closer to 100% than the median.

Research Question 2

What is the level of principals' administrative performance in public senior secondary schools in Benin Metropolis?

The summary of the descriptive statistics of the perceived level of principals' administrative performance in public secondary schools in Benin Metropolis is presented in table 2

Table 2: Descriptive Statistics on a 5 – Point Scale of the Level of Principals' Administrative Performance in Public Senior Secondary Schools

SN	Indicator	SUM	Mean	SD	Percent	Remark
1	Personnel management Performance	219	4.21	1.14	84%	High
2	Resources management	214	4.12	.922	82%	High
3	Instructional leadership	212	4.08	1.04	82%	High
4	Conflict management	215	4.13	.929	83%	High
5	School-community relations	218	4.19	.864	84%	High
6	Personnel development management	240	4.62	4.12	92%	V. High
7	Crises and risk management	221	4.25	.860	85%	High
8	Policy implementation	215	4.13	.886	83%	High

9	Student management discipline	209	4.02	1.00	80%	High
10	Student management welfare	211	4.06	.958	81%	High
11	Performance monitoring	200	3.85	1.16	77%	High
12	Performance accountability	214	4.12	.922	82%	High
13	Compliance management agreement	219	3.98	1.16	80%	High
14	Tech integration & digital management	214	3.63	1.34	73%	High
	Aggregate	**215.7857**	**4.0993**	**.21872**	**82%**	**High**

Table 2 statistics showed that the overall mean level of the principals' administrative performance in public senior secondary schools in Benin Metropolis is approximately 4.0993 in a 5 – point scale with an overall performance of 82%. The standard deviation from the aggregate mean score is .21872. The overall performance ranges from 73% to 92%. Thus, all the indicators of performances were considered high except personnel development performance which was considered very high. The overall mean value of principals' administrative performance in public secondary schools in Benin Metropolis was considered high being closer to 100% than the median.

Research Question 3

What is the extent to which principals' administrative performance predicts physics teachers' effectiveness in public senior secondary schools in Benin Metropolis?

The summary of the extent to which principals' administrative performance predicts physics teachers' effectiveness in public senior secondary schools in Benin Metropolis is presented in table 3

Table 3: Regression Analysis of the Model Fit of Principals' Administrative Performance (a) as Predictor of Physics Teachers Effectiveness in Public Senior Secondary Schools

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Coefficient of Determination	Remark
a	.321	.103	.101	4.36656	10.3%	Very low

Table 3 statistics showed that the coefficient of regression analysis for the model fit of principals' administrative performance as predictor of physics teachers' effectiveness is.321 with an R square of .103. Thus, the coefficient of determination of the model fit is 10.3 %. Thus, principals' administrative performance predicts physics teachers' effectiveness in public senior secondary schools in Benin Metropolis of Edo State by 10.3%. This percentage was considered very low being closer to zero than the median

Research Question 4

What is the extent to which principals' administrative performance predicts physics teachers' effectiveness based on years of teaching Performance in public senior secondary schools in Benin Metropolis?

The summary of the extent to which principals' administrative performance predicts physics teachers' effectiveness based on years of teaching performance in public secondary schools in Benin Metropolis is presented in table 5

Table 5: Regression Analysis of the Model Fit of Principals' Administrative Performance (a) as Predictor of Physics Teachers Effectiveness Based on Years of Teaching Performance (c)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Coefficient of Determination	Remark
A + c	.381a	.145	.025	4.29385	14.5%	Very low

Table 5 statistics showed that the regression analysis for the model fit of principals' administrative performance as predictor of physics teachers effectiveness based on years of teaching performance has coefficient of .381 with an R square of .145. Thus, the

coefficient of determination of the model fit is 14.5 %. This means that principals' administrative performance predicts physics teachers' effectiveness in public senior secondary schools based on gender in Benin Metropolis of Edo State by 14.5 %. This percentage was considered very low because it is closer to zero than the median.

Research Question 5

What is the extent to which principals' administrative performance predicts physics teachers' effectiveness based on teaching qualification in public senior secondary schools in Benin Metropolis?

The summary of the extent to which principals' administrative performance predicts physics teachers' effectiveness based on teaching qualification in public senior secondary schools in Benin Metropolis is presented in table 6

Table 6: Regression Analysis of the Model Fit of Principals' Administrative Performance (a) as Predictor of Physics Teachers Effectiveness Based on of Teaching Qualification (d)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Coefficient of Determination	Remark
a + d	.371[a]	.138	.025	4.29385	13.8%	low

Table 6 statistics showed that the regression analysis for the model fit of principals' administrative performance as predictor of physics teachers effectiveness based on teaching qualification has coefficient of .371 with an R square of .138. Thus, the coefficient of determination of the model fit is 13.8 %. This means that principals' administrative performance predicts physics teachers' effectiveness in public senior secondary schools based on gender in Benin Metropolis of Edo State by 13.8 %. This percentage was considered very low because it is closer to zero than the median

Research Question 6

What is the extent to which principals' administrative performance predicts physics teachers' effectiveness based on gender in public senior secondary schools in Benin Metropolis?

The summary of the regression analysis of the extent to which principals' administrative performance predicts physics teachers' effectiveness based on gender in public senior secondary schools in Benin Metropolis is presented in table 4.

Table 4: Regression Analysis of the Model Fit of Principals' Administrative Performance (a) as Predictor of Physics Teachers Effectiveness Based on Gender (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Coefficient of Determination	Remark
a+ b	.320	.102	.014	4.3787	10.2%	Very Low

Table 4 statistics showed that the regression analysis for the model fit of principals' administrative performance as predictor of physics teachers effectiveness based on gender has coefficient of .320 with an R square of .102. Thus, the coefficient of determination of the model fit is 10.2 %. This means that principals' administrative performance predicts physics teachers' effectiveness in public senior secondary schools based on gender in Benin Metropolis of Edo State by 10.2%. This percentage was considered very low being closer to zero than the median

Summary of the Test of the Hypotheses

The summary of the test of the hypotheses is presented in the following section

Hypothesis 1

The level of effectiveness of physics teachers in public senior secondary schools Benin Metropolis is not significant?

The summary of the one sample t-test of the level of effectiveness of physics teachers in public senior secondary schools in Benin Metropolis is presented in table 7

Table 7: Summary of the one sample t - test of the Level of Effectiveness (Y) of Physics Teachers in Public senior Secondary Schools Benin Metropolis

Var	Mean	Mean diff	95% Confidence Interval of the Difference		t	df	Sig	Decision
			Lower	Upper				
Y	3.9958	1.49583	1.2670	1.7247	14.388	11	.000	Reject Ho

Test value = 2.5

Table 7 statistics showed that the difference between the test value and the mean level of effectiveness of physics teachers in public senior secondary schools in Benin Metropolis is 1.49583. The t –value is 14.388 and it is significant at .000 probability level. Thus, the null hypothesis is rejected at 0.05. This means that the level of effectiveness of physics teachers in public senior secondary schools in Benin Metropolis is significant.

Hypothesis 2

The level of principals' administrative performance in public senior secondary schools in Benin Metropolis is not significant

The summary of the one sample t-test of the level of principals' administrative performance in public senior secondary schools in Benin Metropolis is presented in table 8

Table 8: One Sample t- test of the Level of Principals' Administrative Performance (a) in Public senior Secondary Schools in Benin Metropolis

Var	Mean	Mean diff	95% Confidence Interval of the Difference		t	df	Sig	Decision
			Lower	Upper				
a	4.0993	1.59929	1.4730	1.7256	27.359	13	.000	Reject Ho

Test value =2.5

Table 8 statistics showed that the difference between the mean level of principals' administrative performance in public senior secondary schools in Benin Metropolis and the test value is 1.5993. The t-value is 27.359 and it is significant at .000 probability level. Thus, the null hypothesis is rejected at 0.05. This means that the mean level of principals' administrative performance in public senior secondary schools in Benin Metropolis is significant.

Hypothesis 3

Principals' administrative performance is not a significant predictor of physics teachers' effectiveness in public senior secondary schools in Benin Metropolis.

The summary of the extent to which principals' administrative performance predicts physics teachers' effectiveness in public senior secondary schools in Benin Metropolis is presented in table 9

Table 9: Regression Analysis of Principals' Administrative Performance (a) as Predictor of Physics Teachers Effectiveness in Public Senior Secondary Schools

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	F	Sig	Decision
	B	Std. Error	Beta					
(Constant)	12.803	1.371		9.338	.000	6.23	.03	Reject Ho
a	.352	.068	.321	2.012	.041			

Table 9 statistics showed that regression coefficient of the principals' administrative performance as a predictor of physics teachers' effectiveness in public senior secondary schools in Benin Metropolis is .321 with t value of 2.012. The model fit has F statistics of 6.23 with probability level of .03. Thus, the null hypothesis is retained at 0.05. The implication is that teachers' effectiveness (Y) is significantly predicted by a constant value and principals' administrative performance (a) in public

senior secondary schools in Benin Metropolis. Substituting the standardized coefficients in table 9 in the relationship we have: Y= 13 + .3a, correct to one decimal place.

Hypothesis 4

Principals'' administrative performance is not a significant predictor of physics teachers' effectiveness based on years of teaching performance in public senior secondary schools in Benin Metropolis

The summary of the extent to which principals' administrative performance predicts physics teachers' effectiveness on years of teaching Performance in public senior secondary schools in Benin Metropolis is presented in table 11

Table 10: Regression Analysis of Principals' Administrative Performance (a) as Predictor of Physics Teachers Effectiveness (Y) Based on Year Teaching Performance (c) in Public Senior Secondary Schools

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	F	Sig	Decision
	B	Std. Error	Beta					
(Constant)	17.384	3.208		6.043	.000			
a	.214	.068	.241	4.33	.012	8.25	.010	Reject Ho
c	.314	.663	.311	5.23	.000			

Table 11 statistics showed that, regression coefficients of the principals' administrative performance and teaching performance in the prediction of physics teachers' effectiveness in public senior secondary schools in Benin Metropolis are .241 and .311 respectively with t-values of 4.33 and 5.23 respectively. The model fit has F statistics of 8.25 with probability level of .010. Thus, the null hypothesis is rejected at 0.05. The implication is that principals' administrative performance (a) is significantly moderated by a constant value and teaching performance (c) as a predictor of physics teachers' effectiveness (Y) in public senior secondary schools in Benin Metropolis.

Substituting the standardized coefficients in table 11 in the relationship we have: Y= 17 + .2a + .3c, correct to one decimal place

Hypothesis 5

Principals' administrative performance is not a significant predictor of physics teachers' effectiveness based on teaching qualification in public senior secondary schools in Benin Metropolis

The summary of the extent to which principals' administrative performance predicts physics teachers' effectiveness on years of teaching qualification in public senior secondary schools in Benin Metropolis is presented in table 12

Table 11: Regression Analysis of Principals' Administrative Performance (a) as Predictor of Physics Teachers Effectiveness(Y) Based on Teaching Qualification (d) in Public Senior Secondary Schools

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	F	Sig	Decision
	B	Std. Error	Beta					
(Constant)	19.384	3.208		6.043	.000			
a	.214	.068	.241	4.33	.012	8.25	.010	Reject Ho
d	.254	.663	.211	3.23	.020			

Table 12 statistics showed that, regression coefficients of the principals' administrative performance and teaching qualification in the prediction of physics teachers' effectiveness in public senior secondary schools in Benin Metropolis are .241 and .211 respectively with t values of 4.33 and 3.23 respectively. The model fit has F statistics of 8.25 with probability level of .010. Thus, the null hypothesis is rejected at 0.05. The implication is that principals' administrative performance (a) is significantly moderated by a constant value and teaching qualification (d) as a predictor of physics teachers' effectiveness (Y) in public senior secondary schools in Benin Metropolis.

Substituting the standardized coefficients in table 12 in the relationship we have: Y= 19 + .2a + .2d, correct to one decimal place

Hypothesis 6

Principals' administrative performance is not a significant predictor of physics teachers' effectiveness based on gender in public senior secondary schools in Benin Metropolis?

The summary of the extent to which principals' administrative performance predicts physics teachers' effectiveness based on gender in public senior secondary schools in Benin Metropolis is presented in table 10.

Table 10: Regression Analysis of Principals' Administrative Performance (a) as Predictor of Physics Teachers Effectiveness (Y) Based on Gender (b) in Public Senior Secondary Schools

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	F	Sig	Decision
	B	Std. Error	Beta					
(Constant)	13.427	1.729		7.767	.000			
a	.253	.068	.233	2.11	.041	4.231	.041	Reject Ho
B	-.358	.601	-.056	-.195	.553			

Table 10 statistics showed that regression coefficients of the principals' administrative performance and gender in the prediction of physics teachers' effectiveness in public senior secondary schools in Benin Metropolis are .233 and -.056 respectively with t values of 2.11 and -.195b respectively. The model fit has F statistics of 4.23 with probability level of .041. Thus, the null hypothesis is rejected at 0.05. The implication is that principals' administrative performance is significantly moderated by a constant value and insignificantly by gender (b) as a predictor of physics teachers' effectiveness (Y) in public senior secondary schools in Benin Metropolis. Substituting

the standardized coefficients in table 10 in the relationship we have: Y= 13 + .2a - .1b, correct to one decimal place

Summary of Findings

1. The indicators of the teachers' effectiveness were considered high except in the use of the audio-visual materials which was considered as moderately effective. The overall mean effectiveness of physics teachers in public senior secondary schools in Benin Metropolis was significant and considered high being closer to 100% than the median.
2. The indicators of principals' administrative performance were considered high except personnel development performance which was considered as very high. The overall mean value of principals' administrative Performance in public senior secondary schools in Benin Metropolis was significant and considered high being closer to 100% than the median.
3. Principals' administrative performance predicts physics teachers' effectiveness in public senior secondary schools in Benin Metropolis by 10.3%. This percentage though significant showed low predictive power despite statistical significance.
4. Principals' administrative performance is low and significantly moderated and significantly by a constant value based on years of service as a predictor of physics teachers' effectiveness in public secondary schools in Benin Metropolis.
5. Principals' administrative performance is low and is significantly moderated by a constant value based on teachers' qualification as a predictor of physics teachers' effectiveness in public senior secondary schools in Benin Metropolis.

6. Principals' administrative performance was considered low and significantly moderated by a constant value and insignificantly by gender as a predictor of physics teachers' effectiveness in public senior secondary schools in Benin Metropolis.

Discussion of Results

The first finding of the study revealed that the indicators of physics teachers' effectiveness were considered high, except in the use of audio-visual materials which was moderately effective. The overall mean effectiveness of physics teachers in public senior secondary schools in Benin Metropolis was significant and considered high, being closer to 100% than the median. This finding suggests that physics teachers demonstrated strong competence in core teaching responsibilities such as lesson preparation, content delivery, classroom management, and student assessment. The high overall effectiveness also shows that physics teachers in Benin Metropolis are very effective in carrying out their instructional duties. However, the moderate effectiveness observed in the use of audio-visual materials indicates that some challenges faced by the teachers such as inadequate instructional resources, limited access to technological tools, or insufficient training in the integration of audio-visual technology. This outcome aligns with the findings of Adebayo and Yusuf (2019), who observed that Nigerian secondary school teachers exhibit competence in lesson delivery. Similarly, Eze and Okafor (2021) reported that the use of audio-visual tools enhances learner participation and concept retention in science classrooms. This result also resonates with the assertion of Adegboye (2020), who emphasized that teacher effectiveness is multidimensional, combining instructional delivery, learner engagement, and

adaptability to technological changes. The moderate use of audio-visual materials in this study, therefore, underscores a systemic challenge rather than individual inefficiency, pointing to the need for institutional support and professional development for physics teachers in Edo State.

The second finding of the study revealed that the indicators of principals' administrative performance were considered high, with personnel development rated as very high. The overall mean value of principals' administrative performance in public senior secondary schools in Benin Metropolis was significant and considered high, being closer to 100% than the median. This finding implies that principals in public senior secondary schools in Benin Metropolis are generally effective in performing their administrative roles, particularly in areas related to staff development, supervision, and professional growth. The very high rating of personnel development is an implication that principals place strong emphasis on mentoring, in-service training, and capacity building for teachers. It also implies that school leadership in secondary schools within Benin Metropolis is functioning effectively with outstanding principals' administrative performance. This finding is consistent with the results of Omoregie and Eboh (2022), who found that principals' administrative efficiency positively affects teacher morale and student outcomes in South-South Nigeria. Likewise, Uche and Nwosu (2020) observed that personnel development is a core indicator of effective school leadership, as it fosters teacher motivation and commitment. The finding also agrees with the work of Adeyemi (2018), who concluded that schools with proactive administrators record better teacher productivity. The high performance in personnel development observed in this study may be attributed to the increasing emphasis by the Ministry of Education

on continuous professional training and performance monitoring in public senior schools. Therefore, the overall administrative competence of principals in Benin Metropolis reflects a strengthening of leadership quality in the education sector.

The third finding of the study revealed that principals' administrative performance predicts physics teachers' effectiveness by 10.3%, a percentage considered statistically significant but relatively low. This finding implies that while principals' administrative performance has a meaningful influence on teachers' effectiveness, it however, accounts for only a small proportion of the variation in teachers' performance. Therefore, implying that other factors such as teachers' professional competence, motivation, availability of teaching resources, and students' learning characteristics also play significant roles in determining teachers' effectiveness outside the administrative leadership style being utilized by principals. This indicates that although effective leadership is important, it should be complemented by other supportive factors to achieve optimal teaching effectiveness. This agrees with the findings of Olaitan and Olayanju (2020), who discovered that school leadership contributes modestly to teacher performance, with the strongest effects observed when principals provide regular supervision and instructional support. In a related study, Amadi and Nduka (2021) found that effective leadership indirectly enhances teacher output through improved school climate and teacher engagement. The relatively low predictive strength (10.3%) in this study suggests that physics teachers' effectiveness in Benin Metropolis depends not solely on administrative oversight but also on intrinsic and contextual variables such as remuneration, workload, and availability of teaching aids. The result emphasizes the multifactorial nature of teacher performance and reinforces the need for a holistic

approach to educational management that integrates leadership, motivation, and resource adequacy.

The fourth finding of the study revealed that principals' administrative performance is significantly moderated by teaching performance as a predictor of physics teachers' effectiveness in public senior secondary schools in Benin Metropolis. This finding implies that when teachers already demonstrate strong teaching performance, the positive impact of principals' administrative actions becomes more pronounced. The finding also reveals the interactive nature of leadership and instructional practices, suggesting that effective administration works best in synergy with strong classroom teaching practices. The result supports the findings of Igbinedion and Omoregie (2019), who found that performance of teachers exhibits higher adaptability and responsiveness to instructional leadership. Similarly, Bello and Adedokun (2022) noted that teaching performance moderates the relationship between school management and teacher productivity, especially in technical and science subjects. This outcome suggests that as teachers accumulate years of performance, their interaction with principals' administrative practices becomes more meaningful and impactful. The implication is that principals should tailor supervisory methods to match physics teachers' performance levels, offering more autonomy to seasoned teachers while providing structured guidance to less performed ones.

The fifth finding of the study revealed that principals' administrative performance is significantly moderated by teachers' qualification as a predictor of physics teachers' effectiveness in public senior secondary schools in Benin Metropolis. This finding suggests that teachers' academic and professional qualifications have an

influence on how administrative leadership translates into physics teaching effectiveness. It implies that qualified teachers are more likely to benefit from principals' leadership initiatives, such as supervision, professional development, and instructional support. The finding also shows the importance of recruiting and retaining well-qualified teachers, as their qualifications enhance the effectiveness of administrative leadership. This finding aligns with that of Nwankwo and Eze (2021), who observed that qualified teachers with specialized training in education respond more positively to leadership interventions than unqualified ones. Similarly, Ahmed and Musa (2020) reported that teacher qualification significantly influences classroom performance and correlates with students' academic achievement in science subjects. The finding implies that qualified teachers possess not only subject mastery but also pedagogical competence, which enables them to leverage on administrative support efficiently. Therefore, improving teachers' qualifications through in-service training and postgraduate programs would further enhance the impact of principals' leadership on overall teaching effectiveness in Benin Metropolis.

The last finding of the study revealed that principals' administrative performance is significantly moderated by a constant value and insignificantly by gender as a predictor of physics teachers' effectiveness in public senior secondary schools in Benin Metropolis. This finding indicates that gender does not significantly influence the relationship between principals' administrative performance and physics teachers' effectiveness implying that both male and female teachers respond similarly to administrative leadership in terms of their teaching effectiveness. The finding also suggests that effectiveness in teaching physics is more determined by professional

attributes such as competence, experience, and instructional skills rather than gender differences. This encourages gender equity in educational practice and supports the use of competence-based criteria in evaluating and supporting teachers' performance other than their gender. This aligns with the research of Ojo and Alade (2019), who reported that gender does not play a major role in leadership impact on teacher productivity, as both male and female administrators are equally capable of managing school affairs effectively when given equal opportunities. Similarly, a study by Onuka and Akinola (2020), found no significant gender-based disparity in the instructional supervision style of school leaders across Edo and Delta States. The finding suggests that what truly determine leadership success are not gender, but competence, professional performance, and administrative skill. Therefore, the result supports the argument that educational institutions should emphasize merit and capability rather than gender stereotypes in school leadership appointments.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATION

Summary

This study looked at the principals' administrative performance as a predictor of physics teachers' effectiveness in public senior secondary schools in Benin Metropolis. Six research questions were posed and answered while six hypotheses were formulated and tested in order to direct the investigation.

The following research questions were raised:

Research Questions

The following questions were raised to guide the study:

1. What is the level of effectiveness of physics teachers in public senior secondary schools in Benin Metropolis?
2. What is the level of principals' administrative performance of physics teachers in public senior secondary schools in Benin Metropolis?
3. What is the extent to which principals' administrative performance predicts physics teachers' effectiveness in public senior secondary schools in Benin Metropolis?
4. What is the extent to which principals' administrative performance predicts physics teachers' effectiveness based on years of teaching performance in public senior secondary schools in Benin Metropolis?
5. What is the extent to which principals' administrative performance predicts physics teachers' effectiveness based on teaching qualification in public senior secondary schools in Benin Metropolis?

6. What is the extent to which principals' administrative performance predicts physics teachers' effectiveness based on gender in public senior secondary schools in Benin Metropolis?

The following null hypotheses were tested at 0.05 alpha level of significance

1. The level of effectiveness of physics teachers in public senior secondary schools Benin Metropolis is not significant.
2. The level of principals' administrative performance in public senior secondary schools in Benin Metropolis is not significant.
3. Principals' administrative performance is not a significant predictor of physics teachers' effectiveness in public senior secondary schools in Benin Metropolis.
4. Principals' administrative performance is not a significant predictor of physics teachers' effectiveness based on years of teaching performance in public senior secondary schools in Benin Metropolis.
5. Principals' administrative performance is not a significant predictor of physics teachers' effectiveness based on teaching qualification in public senior secondary schools in Benin Metropolis.
6. Principals' administrative performance is not a significant predictor of physics teachers' effectiveness based on gender in public senior secondary schools in Benin Metropolis.

The correlation survey design was employed in the study. The population of the study was 2,500 respondents. This was made up of 188 Science teachers and 47 principals and 2,265 SS3 science students gotten from 3 local governments in Benin metropolis of Edo state. The Benin Metropolis has three (3) Local Government Areas

with forty-seven (47) Public Secondary Schools in the metropolis. The information was gotten from the research and planning department in the ministry of education, Benin City, Edo State. The sample size of this study was 250 which represent 10% of the entire population. The data collected were analysed using the descriptive statistics of mean, standard deviation, percentage and the regression analysis. The results obtained showed that:

1. The indicators of principals' administrative performance were considered high, with personnel development rated as very high. The overall mean value was statistically significant and considered high.
2. The indicators of teachers' effectiveness were considered high, except for the use of audio-visual materials, which was rated moderately effective. The overall mean effectiveness of physics teachers in public secondary schools in Benin Metropolis was statistically significant and considered high.
3. Principals' administrative performance predicted 10.3% of the variance in physics teachers' effectiveness. Although statistically significant, the predictive power was low.
4. Years of service significantly moderated the relationship between principals' administrative performance and physics teachers' effectiveness in public secondary schools.
5. Teachers' qualification significantly moderated the relationship between principals' administrative performance and physics teachers' effectiveness. However, the overall predictive effect remained low.

6. Gender insignificantly moderates the relationship between principals' administrative performance and physics teachers' effectiveness in Benin Metropolis

Contribution to knowledge

This study has contributed to knowledge as it has established the fact that, principal administrative performance is very important when it comes to physics teachers' effectiveness in the public senior secondary schools. The study has shown that the indicators of physics teachers' effectiveness considered were high and audio-visual materials needs to be provided. The study has been able to established that principal administrative performance predicted physics teachers' effectiveness irrespective of the moderating variables.

Conclusion

Principals' administrative performance significantly predicts physics teachers' effectiveness in terms of fulfilment and contentment. Principals should prioritize building strong relationships with physics teachers, providing support and fostering a positive work environment. By promoting physics teacher effectiveness, principals can contribute to improved educational outcomes and students' achievement. Teachers' years of service and qualification play a significant role in effective delivery of instruction.

Recommendations

The following recommendations are made based on the study's findings:

1. Principals should be encouraged to participate in continuous professional development programs to enhance their leadership and administrative skills.

2. The Ministry of Education should organize workshops and training programs to improve teachers' skills in using modern instructional technologies, particularly audio-visual aids. The government should increase funding for secondary schools to provide adequate resources, including instructional materials and technology, to support teachers' effectiveness.
3. Teachers' years of performance and qualification moderated the relationship between principals' administrative performance and physics teachers' effectiveness. Hence, their years of performance and qualification should be considered in deploying physics teachers for effectiveness.

Suggestions for further studies

Suggestions for further studies based on the findings of this research could include the following:

1. Conduct similar studies in other regions of Nigeria to assess the generalizability of the findings.
2. Use mixed-methods approaches, combining quantitative and qualitative data, to provide a more comprehensive understanding of the factors influencing physics teachers' effectiveness.
3. Investigate the role of school climate, physics teacher motivation, and resource availability in mediating the relationship between principals' administrative performance and physics teachers' effectiveness.
4. Explore the impact of specific principal administrative performance on physics teachers' effectiveness and student outcomes.

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APPENDIX A

LETTER OF INTRODUCTION

School of Post Graduate Studies
Department of Education
Faculty of Arts and Education
Benson Idahosa University
Ugbor, G.R.A, Benin City.

Dear Respondent,

REQUEST FOR COMPLETION OF A QUESTIONNAIRE

I am a Postgraduate student from the Department of Education, Faculty of Arts and Education, Benson Idahosa University, Benin City, Edo Sate as part of the University requirement I am conducting a research work on the topic: **Principal's administrative Performance as predictor of physics teachers' effectiveness in senior secondary schools in Benin Metropolis.**

In light of this, I humbly request your assistance in answering the questions below, which requires simple ticking the appropriate boxes. I assure you your response will be treated with utmost confidentiality and solely for the purpose of this research work.
Thank you.

Yours faithfully,

IMOEKO, Jane Ohitonagbonta
Researcher

APPENDIX B
QUESTIONNAIRE ON PRINCIPALS' ADMINISTRATIVE PERFORMANCE IN SENIOR SECONDARY SCHOOLS (PAEPTE)"

TEACHERS QUESTIONNAIRE

INSTRUCTION: please read the following questions and indicate your responses by ticking [√] in the space provided.

SECTION A:

1. **Gender:** Male [ ] Female [ ]
2. **Qualification:** OND[ ] NCE [ ] HND[ ] B.Sc [ ] M.Sc [ ] P.hD [ ]
3. **Years of Performance :** 0 -5[ ] 5 – 10 [ ] 11-20[ ] 21 above [ ]

SECTION B: PRINCIPAL PERFORMANCE S

KEY: 5 = Very High (VH), 4 = High (H), 3 = Moderate (M), 2 = Low (L), 1 = Very Low (VL).

SN	RATE YOUR PRINCIPAL ADMINISTRATIVE PERFORMANCE	VH 5	H 4	M 3	L 2	VL 1
1.	Personal Management Performance					
2.	Resource management					
3.	Instructional leadership					
4.	Conflict management					
5.	School-community relations					
6.	Personal development management					
7.	Crisis & Risk Management					
8.	Policy Implementation					
9.	Student Management Discipline					
10.	Student Management Welfare					
11.	Performance Monitoring					
12.	Performance Accountability					
13.	Compliance management agreement					
14.	Technology Integration & Digital Management					

QUESTIONNAIRE ON PHYSICS TEACHERS' EFFECTIVENESS IN SENIOR SECONDARY SCHOOLS (PAEPTE)"

STUDENTS QUESTIONNAIRE

INSTRUCTION: please read the following questions and indicate your responses by ticking [√] in the space provided.

SECTION A:

1. **Gender:** Male [ ] Female [ ]

SECTION B: TEACHERS' EFFECTIVENESS

KEY: 5 = Very High (VH), 4 = High (H), 3 = Moderate (M), 2 = Low (L), 1 = Very Low (VL).

SN	RATE YOUR PHYSICS TEACHERS' EFFECTIVENESS	VH 5	H 4	M 3	L 2	VL 1
1	Punctuality					
2	Use of lab coat					
3	Knowledge of the subject					
4	Teaching competence					
5	Use of English					
6	Objective setting					
7	Use of Audio-visual					
8	Use of chalk-Board					
9	Class control					
10	Lesson Note preparation					
11	Use of questions in teaching					
12	Blackboard summary					

QUESTIONNAIRE ON PRINCIPALS ADMINISTRATIVE PERFORMANCE AS A PREDICTOR OF TEACHERS' EFFECTIVENESS IN SENIOR SECONDARY SCHOOLS (PAEPTE)"

PRINCIPAL QUESTIONNAIRE

INSTRUCTION: please read the following questions and indicate your responses by ticking [√] in the space provided.

1. **Gender:** Male [ ] Female [ ]
2. **Qualification:** OND[ ] NCE [ ] HND[ ] B.Sc [ ] M.Sc [ ] P.hD [ ]
3. **Years of Performance :** 0 -5[ ] 5 – 10 [ ] 11-20[ ] 21 above [ ]
4. **School Population:** Less Than 30 [ ] 31 - 50[ ] 51 and Above [ ]

APPENDIX D

LIST OF SCHOOLS FOR THE POPULATION

S/N	LGA	School	Principal	Science Teacher's	SS3 Science Student
1.	Egor	EGOR S/S , EGOR B/C	1	4	11
2.	Egor	USE S/S/S., USE B/C	1	4	11
3.	Egor	UWELU S/S/S., B/C	1	4	11
4.	Egor	IYOBA GIRLS S/S/S., B/C	1	4	11
5.	Egor	EWEKA S/S/S., B/C	1	4	11
6.	Ikpoba-Okha	ADUWAWA SEC. SCH.	1	4	16
7.	Ikpoba-Okha	ST MARIA GORETTI S/S, B/C	1	4	16
8.	Ikpoba-Okha	OGUOLA COLLEGE. B/C	1	4	16
9.	Ikpoba-Okha	QUEEN EDE S/S, B/C	1	4	16
10.	Ikpoba-Okha	CZOLUA G/S, OLOGBO	1	4	16
11.	Oredo	ANGLICAN GIRLS G/S, B/C	1	4	11
12.	Oredo	OBA AKENZUA S/SCH., B/C	1	4	11
13.	Oredo	OBA EWUARE S/S, B/C	1	4	11
14.	Oredo	OREDO GIRLS, B/C	1	4	11
15.	Oredo	EDO COLLEGE, B/C	1	4	11
	Total		**15**	**45**	**190**

APPENDIX E

SN	School Name	LGA	SS3 Science Students		Science Teachers	Principals	Total
			Male	Female			
1.	EGOR S/S , EGOR B/C	Egor	60	50	4	1	**116**
2.	USE S/S/S., USE B/C	Egor	11	21	4	1	**26**
3.	UWELU S/S/S., B/C	Egor	10	15	4	1	**30**
4.	IYOBA GIRLS S/S/S., B/C	Egor	0	42	4	1	**47**
5.	EWEKA S/S/S., B/C	Egor	10	17	4	1	**32**
6.	EVBOTUBU S/S, B/C	Egor	21	28	4	1	**51**
7.	EDO BOYS H/S/S, EGOR. B/C	Egor	53	0	4	1	**55**
8.	ASORO S/S/S, B/C	Egor	40	45	4	1	**87**
9.	OHONRE S/S IS., B/C	Egor	6	4	4	1	**12**
10.	USELU S/S/S., B/C	Egor	12	19	4	1	**33**
11.	OKHOKHUGBO S/S IS. B/C	Egor	15	20	4	1	**37**
12.	EVBAREKE S/S, B/C	Egor	20	25	4	1	**47**
13.	UMELU S/S, UMELU	Ikpoba-Okha	2	3	4	1	**7**
14.	MGER COLLEGE, B/C	Ikpoba-Okha	78	9	4	1	**89**
15.	UGIOMO S/S, EVBORIARIA	Ikpoba-Okha	50	35	4	1	**87**
16.	ADUWAWA SEC. SCH.	Ikpoba-Okha	6	7	4	1	**15**
17.	ST MARIA GORETTI S/S, B/C	Ikpoba-Okha	0	78	4	1	**80**
18.	OGUOLA COLLEGE. B/C	Ikpoba-Okha	22	13	4	1	**37**
19.	QUEEN EDE S/S, B/C	Ikpoba-Okha	0	55	4	1	**57**
20.	CZOLUA G/S, OLOGBO	Ikpoba-Okha	47	43	4	1	**92**
21.	R.R I N. S/S, IYANOMO	Ikpoba-Okha	2	2	4	1	**6**
22.	IDOGBO S/S, IDOGBO	Ikpoba-Okha	34	57	4	1	**93**
23.	AGBONMOBA S/S AGBONMOBA	Ikpoba-Okha	15	10	4	1	**27**
24.	UTE S/S, UTE	Ikpoba-Okha	12	8	4	1	**22**
25.	OSEMWENDE S/S, OHOGHOBI	Ikpoba-Okha	20	25	4	1	**47**

SN	School Name	LGA	SS3 Science Students		Science Teachers	Principals	Total
			Male	Female			
26.	W B H.S , B/C	Ikpoba-Okha	61	0	4	1	**63**
27.	ITOHAN G/G/S. B/C	Ikpoba-Okha	0	93	4	1	**95**
28.	ARMY DAY S/S, IKPOBA HILL	Ikpoba-Okha	15	20	4	1	**37**
29.	OKA S/S. OKA	Ikpoba-Okha	31	29	4	1	**62**
30.	AJOKI S/S. AJOKI	Ikpoba-Okha	6	10	4	1	**18**
31.	EDION S/S	Ikpoba-Okha	9	12	4	1	**23**
32.	URORA S/S, URORA	Ikpoba-Okha	46	34	4	1	**82**
33.	OBASUYl COLLEGE, OBAYANTOR	Ikpoba-Okha	10	8	4	1	**20**
34.	Ikpe S/S	Ikpoba-Okha	0	0	4	1	**2**
35.	OBA AKENZUA SEC. SCH., B/C	Oredo	18	10	4	1	**30**
36.	OGBE SEC. SCH	Oredo	32	20	4	1	**54**
37.	ANGLICAN GIRLS G/S, B/C	Oredo	0	43	4	1	**45**
38.	IHOGBE COLLEGE, B/C	Oredo	35	20	4	1	**57**
39.	IDIA COLLEGE, B/C	Oredo	0	135	4	1	**137**
40.	OBA EWUARE S/S, B/C	Oredo	23	16	4	1	**41**
41.	OREDO GIRLS, B/C	Oredo	0	34	4	1	**36**
42.	EMOTAN COLLEGE, B/C	Oredo	0	42	4	1	**44**
43.	EDOKPOLOR GRAMMER SCH.	Oredo	45	0	4	1	**47**
44.	IMAGUERO COLLEGE, B/C	Oredo	0	56	4	1	**58**
45.	IYEKOGBA G/S, IYEKOGBA	Oredo	28	44	4	1	**74**
46.	NEW ERA GIRLS, B/C	Oredo	0	32	4	1	**34**
47.	EDO COLLEGE, B/C	Oredo	81	0	4	1	**83**
	Grand total		**976**	**1289**	**188**	**47**	**2500**

(Source: Ministry of Education, 2025)

APPENDIX F

RELIABILITY TEST

PRINCIPALS ADMINISTATIVE PERFORMANCE AS A PREDICTOR OF TEACHERS EFFECTIVENESS QUESTIONNAIRE (PAEPTEQ)

PRINCIPALS' PERFORMANCE

```
 /VARIABLES=VAR00001 VAR00002 VAR00003 VAR00004 VAR00005 VAR00006
VAR00007 VAR00008 VAR00009
   VAR00010 VAR00011 VAR00012 VAR00013 VAR00014
 /SCALE('ALL VARIABLES') ALL
 /MODEL=ALPHA
 /STATISTICS=DESCRIPTIVE SCALE
 /SUMMARY=TOTAL.
```

[DataSet0]

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.827	14

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
42.3000	161.567	12.71089	14

TEACHERS EFFECTIVENESS

```
/VARIABLES=VAR00001 VAR00002 VAR00003 VAR00004 VAR00005 VAR00006
VAR00007 VAR00008 VAR00009 VAR00010 VAR00011 VAR00012
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.770	12

Item Statistics

	Mean	Std. Deviation	N
VAR00001	3.9000	.84486	30
VAR00002	3.3333	.92227	30
VAR00003	2.0000	1.25945	30
VAR00004	3.0667	1.22990	30
VAR00005	2.7667	1.04000	30
VAR00006	3.2667	.94443	30
VAR00007	2.8333	.94989	30
VAR00008	2.8000	1.12648	30
VAR00009	3.1667	1.14721	30
VAR00010	2.5000	1.40810	30
VAR00011	2.5000	1.10641	30
VAR00012	3.6000	.89443	30

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR00001	34.8333	47.592	.358	.760
VAR00002	35.4000	45.559	.487	.748
VAR00003	36.7333	42.616	.503	.743
VAR00004	35.6667	45.195	.349	.761
VAR00005	35.9667	43.482	.577	.738
VAR00006	35.4667	45.361	.489	.748
VAR00007	35.9000	50.438	.084	.782
VAR00008	35.9333	44.892	.418	.753
VAR00009	35.5667	46.530	.296	.766
VAR00010	36.2333	44.668	.310	.769
VAR00011	36.2333	47.702	.232	.772
VAR00012	35.1333	43.430	.700	.730

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
38.7333	52.478	7.24418	12