INFLUENCE OF TEACHERS' CHARACTERISTICS ON STUDENTS' ACADEMIC PERFORMANCE IN BIOLOGY IN SELECTED SECONDARY SCHOOLS IN EGOR LOCAL GOVERNMENT AREA, EDO STATE

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BEING A PROJECT WORK SUBMITTED TO THE DEPARTMENT OF CURRICULUM AND INSTRUCTIONAL TECHNOLOGY, FACULTY OF EDUCATION, UNIVERSITY OF BENIN, BENIN CITY. IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE BACHELOR OF SCIENCE (B.SC) DEGREE IN BIOLOGY EDUCATION

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CERTIFICATION

We the undersigned, Certify that this Research work was carried out and written by Chinonyerem Maryjane OGBONNA of the Department of Curriculum and Instructional Technology, Faculty of Education, University of Benin, Benin City, Edo State.

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DEDICATION

This project work is dedicated to God Almighty for His abundant grace in my life and for seeing me through my academic pursuit.

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ABSTRACT

This study examined the influence of teachers' characteristics on students' academic performance in Biology in selected senior secondary schools in Egor Local Government Area of Edo State. The study specifically investigated how teachers' academic qualifications, teaching methods, attitudes toward teaching, professional performance, and classroom management skills relate to students' performance in Biology. A descriptive survey research design was adopted, involving 37 respondents comprising 20 students and 17 teachers selected from 13 public secondary schools in the study area. Data were collected using a structured questionnaire and analyzed using descriptive statistics and multiple regression analysis.

Findings revealed that although students perceived teachers' characteristics as important contributors to effective teaching and a positive learning environment, these characteristics did not significantly predict academic performance in Biology. Regression results showed no significant influence of academic qualifications, teaching methods, teachers' attitudes, professional performance, or classroom management skills on students' Biology performance ($p > 0.05$ for all variables). The study suggests that students' performance may be determined by a combination of factors beyond teacher-related characteristics, including student motivation, availability of instructional resources, home background, and broader school conditions.

The study concludes that while teacher characteristics support effective classroom delivery, they are not sufficient alone to significantly shape academic outcomes in Biology. It recommends enhanced teacher development programs, improved learning resources, stronger administrative support, and holistic educational strategies that integrate teacher quality with student-centered and environmental factors. Future research is encouraged to explore additional determinants of academic performance across broader subjects and context

CHAPTER ONE

INTRODUCTION

Background to the Study

The teacher is often the central figure in many classrooms, guiding learning, shaping attitudes, and influencing the quality of students' understanding in many subjects. This is so for subjects like Biology, where students are expected to grasp theoretical knowledge, as well as practical concepts aimed at equipping them for future scientific and health-related careers. Despite this importance, the performance of many students in Biology has continued to decline over the years. This situation has raised important questions about teachers and their role in the learning process, since their qualifications, methods of teaching, attitude toward work, and how they manage the classroom often significantly influence students' performance.

Education has come to be widely regarded as a pillar of national development, especially in developing countries like Nigeria, where development of human capital is at the core of socio-economic growth and technological advancement (Okoli & Edeh, 2022). Frontline implementers of the curriculum, teachers play a pivotal role in shaping the academic achievement and all-round development of students. Their influence goes beyond mere passing on of subject matter; they are important in shaping learners' attitudes towards learning, constructing scholarly ambition, and developing critical thinking and problem-solving (Adewale & Yusuf, 2021). In science teaching, particularly in Biology, the roles played by the teachers become even more important. Biology is one

of Nigeria's senior secondary school core science subjects and an interface for anyone seeking to study health sciences, agriculture, biotechnology, and environmental management (Eze & Ugwuegbu, 2021). The course is essential for Nigeria to achieve its goals in health care delivery, agricultural production, and environmental protection in line with the Sustainable Development Goals (Federal Ministry of Education, 2021).

Even as the subject is very important, student performance in Biology has continued to deteriorate in previous years. In 2023, only 35% of candidates attained credit-level passes in Biology compared to 42% of candidates in 2020, indicating a consistent downward trend (WAEC, 2023). This situation denies students access to science-related courses in institutions of higher learning and compromises the generation of quality professionals in major industries (Joseph & Adeyemi, 2024). Although issues related to students such as ineffective study habits, lack of motivation, and inadequate exposure to laboratory work are reasons for this poor achievement, teacher-related issues are at the core of the problem and require closer scrutiny (Onah & Ugwoke, 2022). Empirical data from current studies have continuously shown that the quality and type of teachers significantly influence the learning outcomes of students in science subjects. For example, Audu and Aremu (2020) demonstrated that teacher academic and professional qualifications significantly influence the capacity of students to understand complex Biology concepts. Similarly, Imonsili and Nwali (2021) established that students taught by qualified Biology teachers in Esan West, Edo State, attained higher academic accomplishments than those taught by less qualified teachers. Beyond qualifications,

pedagogical methods used by Biology teachers also matter. Innovative, learner-centric methods such as inquiry teaching, group discussion, problem-solving activities, and lab investigations have been shown to enhance students' learning and retention of biological concepts (Olabode & Akintunde, 2022). Through a meta-analysis, Bello and Akinyemi (2023) reaffirmed that active learning strategies reduce science course failure rates by more than 10% and enhance general academic performance by significant proportions compared to traditional lecture-centered teaching.

Teachers' attitudes towards teaching also play an important role in the attitudes and performance of students. Recent studies reveal that when teachers are enthusiastic, empathetic, and have high expectations for their students, they are able to motivate learners to do better (Ogundele & Nwokocha, 2023). This aligns with the Pygmalion effect under which students are observed to perform better when they are anticipated to do so by their instructors (Rosenthal & Jacobson, 1968, reiterated by Okafor & Udo, 2024). Optimistic attitude teachers create supportive learning environments that facilitate them to interact positively and build confidence in their abilities. Classroom management skills also determine the success of Biology education. Teachers who maintain organized classrooms, deal effectively with disorderliness, and create a structured learning environment help students focus and engage actively with course content (Joseph, Ayodele, & Okonkwo, 2024). Poor classroom management leads to distractions and instructional time lost and therefore degrades learning outcomes. In the specific case of the Egor Local Government Area, secondary school Biology teachers possess diverse

academic qualifications, instructional approaches, attitudes, and classroom management (Ugiagbe & Ebohon, 2023). These diversities have the potential to significantly affect the students' learning process. For instance, a teacher who holds a higher degree but lacks effective classroom management skills cannot effectively deliver content, while a teacher with effective student rapport but outdated instructional approaches cannot fully engage students in complex biological issues. With these facts in mind, there is a distinct need to learn how several factors regarding the teacher—academic qualification, pedagogy, pedagogical attitudes, and classroom management—contribute to student performance in Biology in Egor Local Government Area. Profound comprehension of these variables will allow policymakers, education planners, and school leaders to come up with improved interventions like better teacher training, recruitment policy, and professional development programs, all aimed at improving the quality of Biology education and improving the students' academic performance.

Statement of the Problem

Over the past decade, the declining performance of students in Biology has emerged as a persistent concern among educators, policymakers, and parents alike. According to WAEC performance reports, a significant proportion of students consistently fail to obtain credit-level passes in Biology, a trend that hinders their access to science-related fields in higher education. While much attention has been given to student-related challenges such as poor study habits, low motivation, and inadequate exposure to practical work, the role of teachers—who are central to curriculum

delivery—remains insufficiently explored in specific local contexts like Egor Local Government Area. Scholars have long emphasized the relevance of teacher-related factors in shaping academic outcomes. These gaps suggest a fragmented understanding of how teacher-related variables collectively influence student achievement in Biology. In particular, there is limited empirical evidence from the Egor Local Government Area that integrates multiple teacher characteristics—such as academic qualification, teaching method, attitude toward teaching, professional performance and classroom management—and analyzes their combined impact on students' academic performance. This present study aims to fill that gap by conducting a comprehensive investigation into how these five teacher characteristics influence students' academic performance in Biology in selected secondary schools within the Egor Local Government. By examining these factors simultaneously within a localized context, the study seeks to provide a more holistic and context-specific understanding of the teacher-student performance.

Research Questions

The following research questions will guide the study:

1. What is the relationship between teachers' academic qualifications and students' academic performance in Biology?
2. How do teachers' teaching methods influence students' understanding and achievement in Biology?
3. How does teachers' attitude toward teaching affect students' academic performance in Biology?

4. How does teachers' professional performance influence students' academic performance in Biology?
5. To what extent do teachers' classroom management skills impact students' academic performance in Biology?

Purpose of the Study

The main objective of this study is to investigate the influence of selected teacher characteristics on students' academic performance in Biology. Specifically, the study aims to:

1. examine the relationship between teachers' academic qualifications and students' academic performance in Biology.
2. assess the influence of teachers' teaching methods on students' understanding and achievement in Biology.
3. investigate the role of teachers' attitudes toward teaching on students' academic performance.
4. evaluate the effect of teachers' professional performance on students' academic achievement in Biology.
5. determine the impact of teachers' classroom management skills on students' academic outcomes in Biology.

Hypotheses

The study will test the following hypotheses:

H_{01}: There is no significant relationship between teachers' academic qualifications and students' academic performance in Biology.

H_{02}: Teachers' teaching methods do not significantly influence students' academic performance.

H_{03}: There is no significant impact of teachers' attitudes toward teaching on students' academic performance.

H_{04}: Teachers' professional performance does not significantly influence students' academic performance in Biology.

H_{05}: Teachers' classroom management skills have no significant influence on students' academic performance in Biology.

Significance of the Study

This study is significant as it will generate helpful data for various stakeholders within the educational system and contribute to existing efforts to enhance science teaching and, more precisely, Biology in Nigeria. The findings will provide empirical data to school administrators and education planners on how some teacher-specific variables such as qualifications, pedagogy, attitudes towards the profession, and classroom management affect learners' learning outcomes. Such information can guide school leaders in making evidence-based decisions for teacher recruitment, placement, and tailored capacity-building programmes to address areas of need. The study will also

support Biology teachers in enhancing their knowledge of how their teaching practices and personal characteristics affect the experiences and outcomes of students. By focusing on the significance of effective pedagogy, positive dispositions, and classroom management, this study will make teachers rethink their practices and adopt practices that establish a positive and supportive learning environment for students.

Government education policymakers and authorities will be informed by the study's real-world recommendations for improving teacher performance and quality. The lessons can be applied to inform policy that ensures continuous professional development, raises minimum qualification levels, and emphasizes active, student-centered pedagogies in science classrooms. This is necessary to increase numbers of students who excel at Biology and go on to higher studies and professional careers in the sciences. Parents and students indirectly benefit as well. When teachers are effectively prepared, inspired, and endowed with effective teaching and classroom management competencies, students tend to perform well, become self-assured in the science subjects, and have the passion to continue pursuing STEM streams. Improved performance of students in Biology can translate into more diversified opportunities in health sciences, agriculture, environmental management, and biotechnology, which are a prerequisite for national growth. This study will contribute to the existing body of literature on teacher effectiveness and science education in Nigeria. By contrasting how different teacher characteristics interact with one another in the instance of the Egor Local Government Area, it will address gaps found in earlier studies and provide a localized body of evidence that other researchers

can use to build upon. The findings of the research can provide a baseline in comparison for studies elsewhere to inform overall strategy for enhancing teaching and learning of Biology and other sciences. Finally, the research will aid school leaders, teachers, policymakers, students, parents, and researchers in their collective effort to better science education performance, which is very significant in ensuring national education targets and long-term development.

Scope and Delimitations of the Study

This study investigated the influence of teachers' characteristics on students' academic performance in Biology within selected secondary schools in Egor Local Government Area, Edo State. The research focused specifically on senior secondary school students who offer Biology and the teachers responsible for teaching the subject. In examining the role of teachers in shaping student outcomes, the study was delimited to five key teacher-related variables: academic qualifications, teaching methods, attitudes toward teaching, professional performance, and classroom management skills. While these variables were identified as central factors influencing student performance, other potential influences such as school infrastructure, student socio-economic background, or parental involvement were not considered. The study was further confined to selected schools within the Egor Local Government Area, which may limit the generalizability of the findings to other local government areas. Nevertheless, the scope is sufficient to provide meaningful insights into the relationship between teacher characteristics and students' achievement in Biology within the specified context.

Definition of Terms

- **Academic Qualification:** The highest educational degree or certification obtained by the teacher, particularly in relation to Biology or science education.
- **Teaching Methods:** The strategies and techniques employed by the teacher to deliver Biology lessons, including use of practicals, visuals, and interactive approaches.
- **Attitude Toward Teaching:** The teacher's level of enthusiasm, dedication, and professional disposition toward the teaching of Biology.
- **Teachers' Professional Performance:** The extent to which teachers effectively apply their knowledge, skills, and ethical standards to fulfill their instructional duties, including lesson preparation, punctuality, assessment practices, and commitment to students' learning.
- **Classroom Management Skills:** The teacher's ability to organize the learning environment, manage student behavior, and maintain discipline during Biology lessons.
- **Students' Academic Performance:** The measurable achievement of students in Biology, as indicated by test scores, examination results, and overall subject grades.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

In this Chapter, related literature pertinent to this study are reviewed under the following subheadings;

- Theoretical Framework
- Concept of Teachers' Characteristics
- Concept of Students' Characteristics
- Summary of Reviewed Literature

Theoretical Framework

Human Capital Theory

The Human Capital Theory, first conceptualized by Schultz (1961) and subsequently expanded by Becker (1964), is based on the perception that both individuals and societies achieve economic as well as social benefits from investing in knowledge, abilities, and skills of individuals. Education and training are treated as capital, according to this theory, as they enhance the productivity, performance, and potential of an individual just like physical capital like machinery increases production functions. Human Capital Theory, in the context of education, attaches a high degree of significance to the aspect that human resource quality, or more so teachers, is a deciding factor in student academic performance. Teachers are considered assets whose expertise, professionalism, and ongoing improvement can significantly enhance teaching and

learning levels (Okoli & Edeh, 2022). When policymakers and schools spend money on teachers' professional and higher education—by increasing their advanced education credentials, certification, and continuous professional training—they basically contribute to the level of human capital they can bring to students.

Specifically for science subjects such as Biology, which requires comprehension of sophisticated and abstract concepts, the theory argues that educators with high-level academic qualifications and specialized instructional training best break down sophisticated concepts into learnable bits for students. They will also be more willing to employ effective teaching methods, create useful laboratory exercises, and create engaging classroom settings that foster inquisitiveness and critical thinking among learners. Furthermore, Human Capital Theory posits that investments in teacher quality have long-term spillover effects: learners taught by good teachers are more likely to achieve educational attainment, shift to advanced levels of education, and contribute meaningfully to the scientific and technological advancement of the society. Therefore, a teacher's academic qualification is not merely his or her own personal achievement but an integral part in the overall education process with direct effect on learners' academic performance, particularly in demanding subjects like Biology. By basing this research on Human Capital Theory, it is evident that improving the skills and abilities of Biology instructors in Egor Local Government Area is a strategic way of addressing low student performance and establishing a solid base for national science and technology development.

Pygmalion Effect (Rosenthal Effect)

Pygmalion Effect, originally conceived by Rosenthal and Jacobson (1968), describes how student capabilities can be significantly influenced by teachers' expectations of what students are capable of. It is named after Pygmalion, a mythological character and sculptor whose high expectation and belief in his masterpiece brought it to life. In classroom settings, the theory would hold that when teachers feel students are able to perform and make known this to students through both verbal and non-verbal cues, students adopt these beliefs, become more confident, and perform academically. Rosenthal and Jacobson's classic study determined that students who were randomly labeled as "intellectual bloomers" gained significantly more in IQ scores in a single school year merely because their teachers had high expectations of them. The experiment led to the powerful self-fulfilling prophecy that can occur in classrooms: when teachers see potential in students and communicate high expectations, students respond by working harder, being more resilient, and performing at higher levels. Alternatively, low expectations can also have a negative impact. When teachers provide signals of frustration, low competence, or negative stereotypes, their students pick up these signals and respond with lower motivation, lower self-concept, and poor work (Okafor & Udo, 2024). This is especially relevant in such subjects as Biology, where students are likely to perceive fields of study as complex and intimidating. The teacher's enthusiasm, support, and faith in the ability of students to master challenging concepts can exert strong influences with regard to students' attitude towards learning activities.

Recent research by Ogundele and Nwokocha (2023) reaffirms the continued relevance of the Pygmalion Effect in Nigerian secondary schools, showing that teachers who convey optimistic expectations and supportive dispositions have more engaged and successful students. The Pygmalion Effect also extends to managing classrooms: if teachers have high expectations for students to be capable of exercising self-control and self-regulation, they create organized environments that allow learners to focus and flourish. Generally speaking, the Pygmalion Effect points out that teachers' attitude and expectation are not passive variables but instead positive forces constructing students' self-belief and academic success. To this study, it points out that how teachers' attitudes to teach Biology—and their expectations of students' performance—can influence students' motivation, self-assurance, and actual achievement. Concurrently with the Human Capital Theory, the Pygmalion Effect provides a good theoretical framework for comprehending how teachers' academic level, pedagogical approach, attitudes, and classroom management might interact in determining students' academic performance in Biology in Egor Local Government Area.

Concept of Teachers' Characteristics

The study is founded on the reality that certain characteristics of teachers significantly influence the academic performance of students in school, especially in a subject like Biology that deals with theoretical principles and practical application. The truth repeatedly gets established that teachers are one of the most critical elements in school that influence academic performance by students (Joseph & Adeyemi, 2024;

UNESCO, 2023). For instance, the World Bank (2022) reports that in sub-Saharan Africa, teacher quality accounts for up to 30% of the variation in students' test scores, especially in the science and mathematics departments. In Nigeria, Yusuf and Dada (2021) found that the percentage of more qualified science teachers in schools accounted for an average rate of pass in Biology that was 15% higher compared to schools with under-qualified teachers. Similarly, according to WAEC (2023) reports, states with a greater percentage of qualified science teachers always record better results compared to states with low numbers of qualified teachers — but over 40% of secondary school Biology teachers in some Nigerian states lack specialized certification in the subject (Federal Ministry of Education, 2022).

Teacher qualities are multifaceted. Academic qualification remains central as it signals a teacher's command of the subject matter and pedagogical content knowledge (Audu & Aremu, 2020). Studies undertaken in Lagos and Edo States showed that students taught by degree holders in Biology or allied science perform significantly better than students taught by teachers with non-relevant qualifications or without professional certification (Imonsili & Nwali, 2021). Beyond qualifications, teaching methods employed directly impact their students' strategies to and understanding of complex Biology concepts. Engaging, student-centered methods — such as inquiry learning, laboratory experiments, and collaborative projects — have been found to enhance rates of passing science by 10% to 20% versus lecture-homogeneous pedagogy (Bello & Akinyemi, 2023). Yet, there has been evidence that most secondary school Biology

teachers in Nigeria still make extensive use of didactic approaches to teaching, often for reasons such as large class sizes, insufficient training, or inadequate laboratory facilities (Onah & Ugwoke, 2022).

Teachers' attitude towards teaching is also important. Positive, supportive, and trusting teachers who believe in their students' capabilities can improve students' achievement and motivation, a process described by the Pygmalion Effect (Rosenthal & Jacobson, 1968; Okafor & Udo, 2024). Ogundele and Nwokocha (2023), for example, documented that students in schools where teachers had high expectations and demonstrated positive attitude scored on average 12% more in Biology than students whose teachers had low expectations. Finally, classroom management skills help to ensure discipline and maximum utilization of instructional time, which is important for laboratory subjects like Biology. Effective classroom management reduces distractions, encourages participation, and provides a suitable environment for conducting experiments and group work (Joseph, Ayodele, & Okonkwo, 2024). A comparative study by Ugiagbe and Ebohon (2023) in the Benin metropolis showed that Biology teachers who exercised good classroom management had students with better practical scores than those with high rates of classroom disruption. Individually, these characteristics do not exist in isolation. Their cumulative impact has the power to determine if or not the students establish a solid foundation in Biology, perform well in perpetual tests, and pass external examinations like WAEC and NECO. This reason makes the current study attempt to investigate how these teacher characteristics interact in determining the

academic achievement of students in Biology in selected secondary schools in Egor Local Government Area.

Teachers' Academic Qualification

Teachers' academic qualification means the level of formal schooling and specialized training which a teacher has achieved in Biology or sciences (such as B.Sc., M.Sc., or Postgraduate Diploma in Education [PGDE]). Teachers with higher and relevant qualifications are likely to possess more profound subject matter knowledge, more descriptive pedagogical knowledge, and a greater ability to simplify complexities for students (Audu & Aremu, 2020). Recent studies continue to prove that teacher qualification has a direct relationship with student academic performance, particularly in science subjects like Biology. Yusuf and Dada (2021) proved that South-West Nigeria senior secondary schools that had a greater percentage of Biology teachers with at least a Bachelor's degree in Biology attained a mean pass rate of 65% in WAEC Biology against 48% for schools whose teachers were predominantly not holding special qualifications.

The same pattern was observed in Esan West, Edo State, where Imonsili and Nwali (2021) had observed that students instructed by teachers with a Master's degree or above in Biological Sciences performed better than those instructed by teachers with only an NCE or a degree in other disciplines with a mean difference of 12 percentage points. The pattern is in line with world patterns. A UNESCO (2023) publication on quality teachers indicated that in sub-Saharan Africa, pupils of teachers with professional training and academic qualifications score as much as 20% higher in science subjects

compared to pupils whose teachers are not professionally trained. Unfortunately, in Nigeria, the rate of unqualified science teachers is still a problem. Over 35% of Biology teachers in rural public secondary schools do not hold a degree in particular Biology or science-related disciplines, according to the Federal Ministry of Education (2022). To this end, another World Bank (2022) document also pointed out the way that poor teacher qualification is among the main causes of low pass rates in technical and science courses across most developing countries. Contrarily, countries with good teacher training institutions — such as Singapore and Finland — have uniformly high student performance because over 90% of their science teachers have at least a relevant Master's degree (OECD, 2023). While qualifications in isolation do not ensure excellent teaching, they form the basic platform for sound lesson planning, curriculum implementation, and student interaction with complex sciences like Biology (Okoli & Edeh, 2022). Hence, possessing relevant academic and professional qualifications as a teacher in Biology is essential to help students' knowledge, performance in continuous exams, and results in standardized tests like WAEC and NECO.

Teachers' Teaching Methods

Teachers' teaching methods are the methods of teaching, approaches, and strategies used to deliver Biology content to students. They involve inquiry-based learning, guided discovery, laboratory practicals, group discussions, field trips, problem-solving activities, and demonstrations (Bello & Akinyemi, 2023). Good teaching methods are quite crucial in a subject like Biology, which is made up of theoretical concepts and

practicals. Evidence is available that active, student-centered instruction significantly enhances students' science knowledge and long-term retention of science concepts compared to more traditional lecture-based instruction. For instance, Olabode and Akintunde (2022) observed that Lagos State secondary schools where the teachers made extensive use of lab investigations and group projects had a mean 18% increase in Biology test scores as opposed to schools relying on mostly didactic teaching methods. These have been verified by global studies. Active learning strategies have been found to reduce science subject failure rates by as high as 20% and enhance student performance in general as per UNESCO's Global Education Monitoring Report (2023). In Nigeria, however, research shows that most teachers still embrace teacher-centered methods due to large class sizes, lack of training, scant laboratory facilities, and rigid syllabi (Onah & Ugwoke, 2022; Eze & Ugwuegbu, 2021).

A comparative study by Yusuf and Dada (2021) revealed that in those schools where teachers integrated practical exercises and theory, WAEC pass rates in Biology were consistently higher — with an average pass rate of 64% against 46% in schools where practicals were seldom exercised. This finding supports the meta-analysis of Bello and Akinyemi (2023), which had identified that science students subjected to experimentation, problem-based learning, and collaboration performed better on standardized tests. Globally, high-performing science nations such as Finland and Singapore emphasize inquiry-based and project-based learning, where students not only memorize information but also learn to observe, experiment, and reason (OECD, 2023).

Nonetheless, according to the Federal Ministry of Education (2022), over 40% of Biology lessons in the majority of Nigerian public secondary schools do not include regular laboratory work due to the absence of facilities or teachers' incapability to conduct practicals. Therefore, while effective teaching methods have been put in place in order to enhance students' comprehension of Biology concepts, practice at most local schools is nowhere near these best practices. This study will therefore establish the degree to which Biology teachers' choice and application of instructional strategies influence students' performance at selected schools around the Benin metropolis.

Teachers' Attitude Toward Teaching

Teachers' attitude towards teaching is the extent to which a teacher shows passion, commitment, and positivity in teaching and supporting learners' learning. This includes the teacher's willingness to motivate learners, understand them, adjust to the learners' needs, and believe in learners' achievement (Ogundele & Nwokocha, 2023). Research has consistently been able to demonstrate that a teacher's professional attitude can greatly influence students' motivation, self-esteem, and academic achievement. The initial Pygmalion Effect, first established by Rosenthal and Jacobson (1968) and replicated by Okafor and Udo (2024), explains the way in which students themselves excel when their teachers believe in them and positively express high expectations.

In the Nigerian context, recent studies suggest colossal deficiencies in teachers' professional disposition. For instance, a study conducted by Ogundele and Nwokocha (2023) in 15 senior secondary schools in South-West Nigeria revealed that students

instructed by Biology teachers with optimistic, supportive attitudes scored, on average, 12% higher in end-of-term examinations in Biology compared to students with Biology teachers who were negative or indifferent in their attitudes. Similarly, Ogunlade and Balogun (2022) reported that when teachers are nice, patient, and encourage student participation, students tend to develop more interest in hard subjects like Biology and display greater academic resilience. From their study in Lagos State, they found that 72% of the students agreed that encouragement from teachers had increased their confidence with regard to solving hard Biology problems.

Globally, the OECD (2023) further emphasizes that professional attitudes of teachers are very important in establishing inclusive and equitable science classes. Finland and Singapore, for instance, both rank highly in terms of students' performance and invest in teacher well-being and motivation, knowing that positive attitudes are crucial in sustaining students' interest in science (UNESCO, 2023). However, in Nigeria, the meager pay, lack of appreciation for professionals, and large class sizes typically depress the morale and self-esteem of teachers towards innovative teaching (Federal Ministry of Education, 2022). According to Teachers Registration Council of Nigeria (TRCN, 2023), up to 40% of the secondary school teachers report moderate to poor job satisfaction that is likely to influence their classroom behavior and student relationship. Comparative proof indicates that enhanced attitudes of teachers can result in significant student performance gains. For instance, a pilot intervention by Ugiagbe and Ebohon (2023) in Egor Local Government Area that imparted Biology teachers with student-

centred motivation techniques achieved a 15% improvement in students' continuous assessment scores over a term. Therefore, this research recognizes teachers' attitude towards teaching as an important factor that affects how students perceive Biology, approach learning tasks, and, actually, perform in the subject. Identification of whether positive or negative teacher attitudes impact student performance will benefit the education stakeholders in designing professional development and motivation programs promoting supportive, high-expectation classrooms.

Teachers' Classroom Management Skills

Classroom management skills of teachers are an indication of the extent to which a teacher organizes the learning environment, imposes discipline, handles disruptive behaviour, and creates an orderly environment that maximizes instructional time in Biology classes (Joseph, Ayodele, & Okonkwo, 2024). Classroom management is crucial in practical subjects like Biology, where students spend much time on laboratory work, group work, and experiments that require order, safety, and focus. It has been proven through studies that good classroom management is synonymous with improved student engagement, less disruption, and academic success. For example, Ogunlade and Balogun (2022) proved that Lagos State secondary schools with "highly effective" classroom managers as teachers recorded up to 15% more pass rates in Biology compared to schools with frequent classroom disruptions. In a comparative study, Yusuf and Dada (2021) indicated that poor classroom management results in lost instructional time, increased students' misbehaviour, and decreased learning achievement in the sciences. They

reported that in poorly managed schools, students spent as much as 20% less time on task in Biology classes than students in well-managed classrooms. Globally, the OECD (2023) emphasizes that effective classroom management is one of the strongest predictors of learning efficacy, especially for large classes which are common in low- and middle-income nations. In Nigeria, the situation is worsened by overcrowded classrooms — to the extent that some Biology classes consist of 50 to 80 students — which renders classroom management even more challenging (Federal Ministry of Education, 2022).

Ogundele and Nwokocha (2023) also noted that instructors who utilize proactive strategies — such as clear rules, positive reinforcement, and student participation in establishing rules — tend to foster more structured and interactive Biology classes. This, in turn, creates an enabling learning atmosphere that allows students to concentrate more on difficult concepts. A local study conducted by Ugiagbe and Ebohon (2023) in some secondary schools in Benin metropolis established that Biology teachers who had good classroom management skills had students who performed on average 10–12% better in practical exams than students taught by teachers who had poor discipline and organization during practical classes. In comparison, high-achieving education systems like Singapore and Finland invest in continuous training in classroom management, equipping teachers with strategies to cater to diverse learner needs and minimize off-task behavior (OECD, 2023; UNESCO, 2023). This necessitates longer-term professional development for Nigerian Biology teachers to improve their classroom control skills. Therefore, this study recognizes that classroom management is not only about keeping

students in order but also about creating an environment in which significant learning, experimentation, and inquiry can take place. Investigating the impact of Biology teachers' classroom management skills on the academic achievement of students will unearth pragmatic solutions to improve lesson delivery and outcomes in secondary schools in Egor Local Government Area, Edo State.

Concept of Students' Academic Performance

Students' academic performance outlines the measurable outcomes that reflect how well students understand, recall, and apply knowledge and skills acquired in Biology. In this study, students' academic performance will be assessed against three general dimensions: school continuous assessment marks, end-of-term examination outcomes, and standardized external examination outcomes such as the West African Senior School Certificate Examination (WAEC) or National Examination Council (NECO) Biology outcome (Yusuf & Dada, 2021). Continuous assessments (CAs) are significant because they give students constant feedback on their performance, identify areas that need improvement, and make students always engage with Biology concepts (Joseph & Adeyemi, 2024). For example, in a recent WAEC Chief Examiners' Report (WAEC, 2023), it was noted that students who take continuous assessments frequently are likely to achieve 10–15% higher final marks for Biology than students who sit end-of-year exams only. End-of-term test scores give a larger picture of cumulative understanding and idea integration in different subjects of the Biology curriculum (Federal Ministry of Education, 2022). In Edo State, institutions with routine internal marking and stringent termly

examinations have stronger student performance trends in national exams, as dictated by Ugiagbe and Ebohon (2023). The third is the external examinations that are standardized such as WAEC or NECO, which give an impartial standard for measuring students' achievement across schools, states, and divisions (UNESCO, 2023). However, national pass rates in Biology continue to be an issue of concern in Nigeria. The WAEC (2023) annual report shows that only 35% of candidates had credit-level passes in Biology in 2023, against 42% in 2020, showing a trend of decline that undermines the readiness of students in enrolling for science-related courses in the institutions of higher learning (Federal Ministry of Education, 2022).

In contrast, global evidence exhibits analogous trends in low- and middle-income countries. It is reflected by the World Bank (2022) that in sub-Saharan Africa, less than 40% of students attain minimum science subject proficiency due to factors such as low teaching quality, lack of practical exposure, and inefficient assessment systems. On the other hand, countries with high-scoring students in science — such as Singapore and Finland — focus on various forms of assessments, lab work, and continuous feedback to allow students to gain theoretical knowledge as well as problem-solving skills (OECD, 2023).

Nigerian research also shows that teacher-related factors, including qualification, pedagogy, attitude, and classroom management, collectively determine students' performance on these assessment dimensions (Imonsili & Nwali, 2021; Bello & Akinyemi, 2023). This calls for this study to examine how teachers' characteristics

establish students' continuous assessment scores, end-of-term Biology exam results, and external Biology results in selected schools in the Egor Local Government Area.

Test Score

Test scores are quantifications of students' performance in routine class tests, quizzes, and continuous assessments in Biology. Test scores are direct assessments of students' short-term knowledge, retention of concepts, and recall and application of learned knowledge (Joseph & Adeyemi, 2024). Regular testing allows teachers to find out students' knowledge deficiencies and adjust their teaching strategies (Yusuf & Dada, 2021). In Nigeria, CAs account for 30–40% of a student's final result in most senior secondary schools, as embodied in the National Policy on Education (Federal Ministry of Education, 2022). This means that test results have a significant contribution to the overall academic performance of students. It has long been established through research that schools with structured and regular assessment calendars have students with higher retention rates and better performance in external examinations. For instance, Ugiagbe and Ebohon (2023) found that weekly tests in Biology in selected secondary schools in the Benin city improved students' performance in end-of-term examinations by 15–18% compared to students who wrote just one or two major tests per term. Similarly, Imonsili and Nwali (2021) reported that frequent formative testing in Biology classes allows students to build confidence and master problem-solving strategies.

Globally, regular formative testing is a proven way of enhancing the performance of students in the sciences. According to the OECD (2023), students from nations like

Singapore and Finland, where science teaching involves regular formative testing and immediate feedback, consistently score well in global testing systems such as PISA. As shown in the OECD report, regular low-stakes quizzes and short tests allow students to consolidate learning and reduce test anxiety when undertaking high-stakes tests. On the other hand, the World Bank (2022) notes that in the majority of sub-Saharan African countries, like Nigeria, some schools still do not conduct efficient continuous assessments due to overcrowded classrooms, absence of record-keeping systems, or teachers' motivation. This often makes students lag behind in cumulative Biology content, leading to poor retention and performance in standardized examinations like WAEC or NECO.

Moreover, Bello and Akinyemi (2023) emphasized that teacher variables such as teaching approaches, feedback, and the level of congruence between tests and lesson objectives significantly influence test scores. Students taught by teachers who use test scores in providing constructive feedback and remediation assistance have been shown to demonstrate improved mastery of Biology concepts (Olabode & Akintunde, 2022). The study, therefore, focuses on test scores as an important area for monitoring students' academic achievement in Biology. It suggests not only what students learn in the short run, but also how effectively teachers' qualities — comprising their qualification, teaching method, attitude, and classroom management — assist in frequent monitoring and improvement in student learning outcomes.

Examination Results

Examination results indicate students' performance on end-of-term or end-of-year Biology examinations, which test their cumulative understanding and ability to synthesize, apply, and interpret concepts acquired over a prolonged period (Joseph & Adeyemi, 2024). Unlike shorter quizzes or more frequent tests, end-of-term exams offer broader measurement of students' mastery of Biology, showing how well they have retained, connected, and understood the subject. In Nigeria, end-of-terms and end-of-year examinations typically account for between 60–70% of a student's overall score in every subject, e.g., Biology (Federal Ministry of Education, 2022). That is, they carry high markings in the assessment of students to progress to the next class as well as for sitting for external certification examinations like WAEC and NECO. Empirical studies determine that students' performance in Biology examinations is largely influenced by the quality of lessons offered by instructors, class discipline, and support received by students throughout the term. For example, Yusuf and Dada (2021) deduced that students in schools where the delivery of lessons in an orderly manner and good classroom organization were present had a mean pass rate of 68% in Biology end-of-term examinations compared to 49% in schools where incessant disruption or lack of order in lessons prevailed.

Similarly, another recent Edo State research by Ugiagbe and Ebohon (2023) also concluded that consistent use of interactive pedagogies, frequent examination, and immediate feedback throughout the term increased students' end-of-term Biology test

scores by up to 15%. This shows that passing exam performance is rarely an accident; instead, it is the cumulative effect of effective teaching methods, teacher attitudes, and classroom management throughout the school term. Internationally, the OECD (2023) points out that top-scoring countries in science examinations such as Singapore and Finland employ ongoing cumulative assessments to facilitate learning by the students. Such systems direct students to develop concept understanding sequentially instead of isolated studying for final exams — a procedure which remains prevalent in the majority of Nigerian institutions (World Bank, 2022).

The West African Examinations Council (WAEC, 2023) Chief Examiners' Report also states that students' knowledge gaps typically result in poor performance in practical and theory sections of the Biology paper. For example, the report stated that over 55% of the students failed to interpret diagrams or explain biological processes accurately because of the absence of proper practice and explanation during the term (WAEC, 2023). Scholars such as Bello and Akinyemi (2023) have also shown that teacher variables have a significant impact on end-of-term examination performance. Their meta-analysis of 30 Nigerian schools confirmed that schools where learners are treated with learner-centered approaches to teaching, receive feedback, and are motivated through the term have higher mean Biology examination scores than institutions where teacher-centered or rigid strategies are followed. Therefore, this study recognizes end-term or end-year Biology examination performance as an important component of students' learning achievement. A study of how teachers' credentials, teaching styles, dispositions, and classroom

management can influence students' collective examination performance will make a greater impact in improving long-term learning accomplishment in Biology in Egor Local Government Area.

External Exam Results

External exam results refer to students' performance on public national exams, e.g., the West African Senior School Certificate Examination (WASSCE) by WAEC and National Examination Council (NECO) Biology papers. The results provide an objective and standardized measure of students' mastery of the Biology curriculum (WAEC, 2023; Yusuf & Dada, 2021). Unlike classroom or internal end-of-semester tests, national standardized external exams share the same marking schemes and national standards and, therefore, offer a reliable basis on which students' performance can be compared and contrasted across institutions, states, or regions (Federal Ministry of Education, 2022). Success in such examinations has generally remained a fundamental doorway to entry into tertiary science-oriented courses, such as medicine, agriculture, and biotechnology (Joseph & Adeyemi, 2024). Current WAEC reports reveal that the performance of students in Biology has been a cause for concern in Nigeria. For example, the WAEC (2023) Chief Examiners' Report showed that in 2023, only about 35% of candidates obtained credit-level passes (A1–C6) in Biology, a drop from 42% in 2020. The fall reveals that thousands of students are excluded from science courses that require credit passes in Biology and other core sciences (WAEC, 2023; Ogunlade & Balogun, 2022). In contrast to this, research has proven that teacher-related factors have a significant

influence on students' performance in Biology standard exams. Bello and Akinyemi (2023) determined that students taught by more trained and educated teachers had their average scores by 12% higher in WAEC Biology than students who were taught by less trained teachers. In addition, Imonsili and Nwali (2021) demonstrated that interactive learner-centered instructional practices and routine practical work improve students' readiness for the SPQ and essay aspects of WAEC Biology examinations.

In Egor Local Government Area, Ugiagbe and Ebohon (2023) highlighted that students in schools with Biology teachers who maintained effective classroom discipline and encouraged practical lab work fared much better in NECO and WAEC than students in schools that had poor lab work or poor classes. Their findings emphasize that passing external examinations depends not on cramming but on the holistic effect of systematic and interactive pedagogic practices. Across the globe, countries with good science test ranking—such as Finland, Singapore, and South Korea—invest significant resources into training teachers, student-inquiry instruction, and laboratory experience (OECD, 2023). The World Bank (2022) finds, however, that students in sub-Saharan Africa perform poorly on standardized science tests because of too large of a class size, lack of proper laboratory equipment, and limited teacher capacity to provide student-centered teaching. It is also important to highlight that external examinations like WAEC and NECO are designed to test higher-order thinking skills, which mean analysis, application, and evaluation (WAEC, 2023). Poor performance, especially in essay and structured practical sections, typically indicates students were not provided with sufficient hands-on practical

work or problem-solving sessions during regular lessons (Joseph & Adeyemi, 2024). Therefore, in this study, performance on external exams is one of the main criteria used to determine the academic performance of students in Biology. In investigating how teachers' academic qualifications, instructional strategies, professional dispositions, and classroom management influence the performance of students on standardized exams, the study will provide evidence to inform targeted interventions for improving Biology performance in Egor Local Government Area.

Summary of Reviewed Literature

The literature reviewed shows that students' academic performance, even in a science subject like Biology, is influenced by several factors related to teachers. The Human Capital Theory and the Pygmalion Effect confirm the assumption that teachers' qualifications, professional attitude, and expectations play an important role in influencing students' academic success. Empirical studies have established that the higher qualification of teachers would be linked to better student performance in science subjects (Audu & Aremu, 2020; Imonsili & Nwali, 2021). Likewise, the use of student-centered and inquiry-based teaching pedagogies enhances students' understanding and recall of Biology concepts (Olabode & Akintunde, 2022). Teachers with positive attitudes and enthusiasm have been shown to motivate students to be more engaged and perform better (Ogundele & Nwokocha, 2023). Additionally, effective classroom management offers a structured learning atmosphere with minimal distraction, thereby increasing students' focus and engagement (Joseph, Ayodele, & Okonkwo, 2024).

But existing research has a tendency to handle each of these teaching qualities in isolation rather than examining their combined effect on students' performance. Furthermore, localized studies specifically aimed at the specific setting of Egor Local Government Area are few and far between. This study therefore aims to fill this gap by providing comprehensive evidence on the effect of teachers' educational qualifications, teaching methodology, attitude towards teaching and classroom management skills cumulatively on students' academic performance in Biology in sampled secondary schools in Egor Local Government Area, Edo State.

CHAPTER THREE

METHODOLOGY

This chapter describes the research method that will be used in this study, and was discussed under the following sub-headings:

- Research Design
- Population of the Study
- Sample and Sampling Technique
- Research Instrument
- Validity of the Instrument
- Reliability of the Instrument
- Method of Data Collection
- Method of Data Analysis

Research Design

The study employed a descriptive survey research design. This design was considered appropriate because it enables the collection of quantifiable data from a representative sample and allows the researcher to examine relationships between teacher characteristics (academic qualifications, professional performance, teaching methods, attitudes toward teaching, and classroom management skills) and students' academic performance without manipulation of variables.

Population of Study

The population of this study comprised senior secondary school Biology teachers and SS1–SS3 students in 13 selected public senior secondary schools within Egor Local Government Area (LGA), Benin City. The schools included Asoro Senior Secondary School, Edo Boys High School, Egor Secondary School, Evbareke Secondary School, Evbotubu Secondary School, Eweka Senior Secondary School, Government Science & Technical College Ugbowo, Iyoba Girls' Senior Secondary School, Ohonre Secondary School, Okhokhugbo Secondary School, Use Senior Secondary School, Uselu Senior Secondary School, and Uwelu Senior Secondary School. From these schools, the total population comprised 20 students and 17 teachers, giving a combined total of 37 respondents. These respondents were considered representative of the senior secondary school Biology students and teachers in the selected public schools of Egor LGA for the purpose of investigating the influence of teachers' characteristics on students' academic performance in Biology.

Sample and Sampling Technique

The sample size for the study was determined using Taro Yamane's formula with a 5% margin of error, which yielded a total of 34 respondents from the accessible population of 37. To ensure representativeness, a multi-stage sampling procedure was adopted. First, the 13 public senior secondary schools in Egor LGA were purposively selected because they offer senior secondary Biology. Within each school, students were randomly selected to meet the required proportion of the sample, while teachers were

purposively selected based on their active involvement in teaching senior secondary Biology. This approach ensured that both students and teachers across the 13 schools were adequately represented, allowing the study to reliably examine the relationship between teachers' characteristics—such as academic qualifications, professional performance, teaching methods, attitudes toward teaching, and classroom management skills—and students' academic performance in Biology.

Research Instrument

The primary instrument for data collection in this study was a structured questionnaire titled "Teachers' Characteristics and Students' Academic Performance in Biology Questionnaire (TCSPBQ)." The questionnaire was carefully designed to align with the objectives of the study and to capture both demographic and research-related information. It was organized into five main sections.

Section A focused on the demographic information of both teachers and students, which included details such as age, gender, and class level. Section B contained items designed to measure teachers' academic qualifications, while Section C concentrated on evaluating the various teaching methods employed by teachers in the delivery of Biology lessons. Section D addressed teachers' attitudes toward teaching Biology, capturing their level of enthusiasm, dedication, and professional disposition. Section E dealt with classroom management skills, assessing the teachers' ability to organize the learning environment effectively and manage student behavior. To ensure uniformity in responses and to allow for quantitative analysis, items in Sections B through E were structured on a

five-point Likert scale. The scale ranged from Strongly Agree (5) to Strongly Disagree (1), enabling respondents to express the degree of their agreement or disagreement with each statement.

Validity of the Instrument

To establish validity, the draft questionnaire was submitted to three experts in Biology Education and Curriculum Studies at the University of Benin. Their review ensured content and face validity, focusing on clarity, relevance, and appropriateness of items to the study objectives. Their corrections were incorporated before final administration.

Reliability of the Instrument

The reliability of the instrument was tested through a pilot study involving 10 biology students respondents outside Egor LGA. The responses were subjected to internal consistency using Cronbach's Alpha coefficient. The overall reliability index obtained was 0.814, indicating a high level of consistency and suitability for the main study.

Method of Data Collection

An introduction letter was obtained from the Department of Educational Foundations, University of Benin, and presented to the school principals for permission. The questionnaires were personally administered by the researcher with the assistance of trained field assistants. For students, academic performance data (Biology test and exam scores) were collected from school records with due clearance. The process took approximately two weeks. Respondents were assured of confidentiality and anonymity.

Method of Data Analysis

The data collected from the respondents were systematically coded and analyzed with the aid of the Statistical Package for Social Sciences (SPSS) version 25. Descriptive statistics, including mean, standard deviation, frequency, and percentage, were employed to summarize and present the demographic characteristics of the respondents as well as to provide an overview of the variables under study. In addition, multiple regression analysis was conducted to test the research hypotheses and to examine the extent to which teachers' characteristics influence students' academic performance in Biology. All tests of significance were carried out at 0.05 level, which provided a reliable basis for determining the strength and significance of the relationships between the variables.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

Introduction

This chapter presents the analysis of the data generated for the study. It begins with the analysis and presentation of the bio-data of the respondents, followed by a descriptive analysis of the research variables (both dependent and independent). Thereafter, the hypotheses are tested to determine the relationship between creative accounting practices and the credibility of financial reports, in line with the objectives of the study as stated in Chapter One.

Data Presentation and Analysis.

A total of sixty (60) questionnaires were distributed to staff members of selected commercial banks in Benin City, Edo State, and all were retrieved, representing a 100% response rate. The responses reflect the perceptions and experiences of the participants regarding the effect of creative accounting on the credibility of financial reports. The data obtained are analyzed and presented in this chapter, which concludes with a discussion of the study's findings.

Demographic Information

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	20	54.1	54.1	54.1
	Male	17	45.9	45.9	100.0
	Total	**37**	**100.0**	**100.0**	

Author's Compilation 2025 (SPSS 27)

The table shows the gender composition of respondents who participated in the study. Out of the total 37 respondents, 20 (54.1%) were female, while 17 (45.9%) were male. This indicates that female respondents slightly outnumbered their male counterparts in the study sample. The result suggests that both genders were adequately represented, ensuring a balanced perspective in the data collected on the influence of teachers' characteristics on students' academic performance in Biology. The near-even distribution further enhances the validity of the findings, as it reflects a fair gender representation among the sampled teachers and students.

Age Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	14-15	26	70.3	70.3	70.3
	16-25	11	29.7	29.7	100.0
	Total	**37**	**100.0**	**100.0**	

Author's Compilation 2025 (SPSS 27)

The table presents the age distribution of the respondents. It shows that the majority of the participants, 26 respondents representing 70.3%, were within the 14–15 years age group, while 11 respondents, accounting for 29.7%, fell within the 16–25 years age range. This indicates that most of the respondents were within the typical age bracket for senior secondary school students, which is between 14 and 17 years. The small percentage of respondents aged 16–25 years may include older students who experienced delays in schooling or were repeating classes. Overall, the age distribution confirms that the sample

is appropriate for studying students' academic performance in Biology at the secondary school level.

Class Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SSS1	3	8.1	8.1	8.1
	SSS2	5	13.5	13.5	21.6
	SSS3	29	78.4	78.4	100.0
	Total	**37**	**100.0**	**100.0**	

Author's Compilation 2025 (SPSS 27)

The table displays the class distribution of the student respondents. Out of the total 37 participants, 3 students (8.1%) were in SSS1, 5 students (13.5%) were in SSS2, while the majority, 29 students (78.4%), were in SSS3. This indicates that most of the respondents were final-year senior secondary school students. The dominance of SSS3 students suggests that the data largely reflect the views and experiences of learners who have had more exposure to Biology and are preparing for external examinations such as WAEC or NECO. Their responses are therefore considered reliable and insightful in assessing the influence of teachers' characteristics on students' academic performance in Biology.

Name of School

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Edo Boys High School	8	21.6	21.6	21.6
	Egor Secondary School	5	13.5	13.5	35.1
	Evbareke Secondary School	2	5.4	5.4	40.5
	Evbotubu Secondary School	3	8.1	8.1	48.6
	Eweka Senior Secondary School	1	2.7	2.7	51.4

Government Science & Technical College	2	5.4	5.4	56.8
Iyoba Girls Senior Secondary School	8	21.6	21.6	78.4
Use Senior Secondary School	2	5.4	5.4	83.8
Uselu Senior Secondary School	5	13.5	13.5	97.3
Uwelu Senior Secondary School	1	2.7	2.7	100.0
Total	**37**	**100.0**	**100.0**	

Author's Compilation 2025 (SPSS 27)

The table shows the distribution of respondents across the ten selected senior secondary schools in Egor Local Government Area. The results indicate that Edo Boys High School and Iyoba Girls' Senior Secondary School each contributed the highest number of respondents, with 8 students each (21.6%). This is followed by Egor Secondary School and Uselu Senior Secondary School, each contributing 5 students (13.5%). Evbotubu Secondary School had 3 respondents (8.1%), while Evbareke Secondary School, Government Science and Technical College, and Use Senior Secondary School each had 2 respondents (5.4%). The least represented schools were Eweka Senior Secondary School and Uwelu Senior Secondary School, each with 1 respondent (2.7%). This distribution reveals that the study sample was fairly drawn from multiple schools within Egor Local Government Area, ensuring diversity and representativeness of student experiences across different educational settings. The relatively higher number of respondents from Edo Boys and Iyoba Girls suggests that these schools had greater participation, possibly due to larger student populations or better access to Biology students during the data collection period.

Presentation of the Results

Teachers' Academic Qualification

S/N		N	Mean	Std. Deviation	Criterion Mean	Decision
1.	Teachers with higher academic qualifications teach Biology more effectively.	37	4.32	.818	3.00	Agree
2.	My Biology teacher's level of education positively influences my performance.	37	4.32	.973	3.00	Agree
3.	Teachers with specialized training in Biology help students understand better.	37	3.57	1.519	3.00	Agree
4.	Teachers with professional qualifications use better teaching techniques.	37	3.65	1.531	3.00	Agree
5.	Lack of adequate teacher qualification negatively affects Biology performance.	37	3.43	1.281	3.00	Agree
	Grand Mean		**3.86**			

Author's Compilation 2025 (SPSS 27)

The analysis of the effect of teachers' academic qualifications on students' academic performance in Biology reveals a strong consensus among respondents that higher teacher qualifications significantly influence learning outcomes. With a grand mean of 3.86, which is well above the criterion mean of 3.00, the results show that respondents generally agree with all the statements presented.

Respondents agreed that teachers with higher academic qualifications teach Biology more effectively (Mean = 4.32), and that the level of education of their Biology teachers positively influences their performance (Mean = 4.32). This suggests that higher educational attainment among teachers is perceived as crucial for effective content delivery and student comprehension.

Furthermore, respondents agreed that teachers with specialized training in Biology help students understand the subject better (Mean = 3.57), and that teachers with professional qualifications employ better teaching techniques (Mean = 3.65). These findings indicate that both subject specialization and professional preparation are seen as key factors in enhancing instructional quality.

Taken together, these findings acknowledged that a lack of adequate teacher qualification negatively affects students' performance in Biology (Mean = 3.43), highlighting the detrimental impact of insufficiently trained or underqualified teachers on student learning outcomes. Overall, the findings demonstrate that teacher qualifications are a significant determinant of students' academic achievement in Biology.

Teachers' Teaching Methods

S/N		N	Mean	Std. Deviation	Criterion Mean	Decision
1.	My teacher uses teaching methods that make Biology lessons interesting.	37	3.76	.983	3.00	Agree
2.	Use of practical demonstrations helps me understand Biology concepts better.	37	3.84	1.444	3.00	Agree
3.	My teacher encourages class participation during Biology lessons.	37	3.81	1.330	3.00	Agree
4.	The use of visual aids enhances my understanding of Biology topics.	37	4.00	1.269	3.00	Agree
5.	Poor teaching methods reduce my interest in learning Biology.	37	4.00	1.054	3.00	Agree
	Grand Mean		**3.88**			

Author's Compilation 2025 (SPSS 27)

The analysis of the effect of teachers' teaching methods on students' academic performance in Biology reveals a strong consensus among respondents that the methods employed by teachers significantly enhance learning outcomes. With a grand mean of 3.88, which is well above the criterion mean of 3.00, the results show that respondents generally agree with all the statements presented.

Specifically, respondents agreed that teachers use teaching methods that make Biology lessons interesting (Mean = 3.76), and that the use of practical demonstrations helps them understand Biology concepts better (Mean = 3.84). This suggests that interactive and hands-on teaching approaches are perceived as effective strategies for improving comprehension and engagement in Biology lessons.

Furthermore, respondents agreed that teachers encourage class participation during Biology lessons (Mean = 3.81) and that the use of visual aids enhances understanding of Biology topics (Mean = 4.00). These findings indicate that active participation and visual instructional support are key factors in facilitating effective learning.

In addition, respondents agreed that poor teaching methods reduce their interest in learning Biology (Mean = 4.00), highlighting the negative impact of ineffective instructional approaches on student motivation and engagement. Overall, the results underscore the importance of employing learner-centered, participatory, and visually supported teaching methods to improve students' academic performance in Biology.

Teachers' Attitude toward Teaching

S/N		N	Mean	Std. Deviation	Criterion Mean	Decision
1.	My teacher shows enthusiasm and passion when teaching Biology.	37	3.73	1.170	3.00	Agree
2.	A positive attitude from my teacher motivates me to study Biology.	37	3.65	1.379	3.00	Agree
3.	Teachers who are dedicated and punctual inspire better student performance.	37	3.89	1.197	3.00	Agree
4.	Teachers' lack of interest in teaching affects my motivation to learn Biology.	37	3.92	1.187	3.00	Agree
5.	Teachers who are approachable make learning Biology easier.	37	4.19	1.101	3.00	Agree
	Grand Mean		**3.88**			

Author's Compilation 2025 (SPSS 27)

The results on how teachers' attitudes toward teaching on students' academic performance in Biology reveals a strong consensus among respondents that positive teacher attitudes significantly influence learning outcomes. With a grand mean of 3.88, which is well above the criterion mean of 3.00, the results show that respondents generally agree with all the statements presented.

Specifically, respondents agreed that teachers show enthusiasm and passion when teaching Biology (Mean = 3.73), and that a positive attitude from their teacher motivates them to study the subject (Mean = 3.65). This suggests that teacher enthusiasm and encouragement play a crucial role in fostering student interest and engagement in Biology lessons.

Meanwhile, the results indicate that teachers who are dedicated and punctual inspire better student performance (Mean = 3.89), and that a lack of teacher interest negatively affects students' motivation to learn Biology (Mean = 3.92). These findings highlight respondents' awareness of the importance of teacher commitment and consistent professional conduct.

In line with this, respondents also agreed that teachers who are approachable make learning Biology easier (Mean = 4.19), which underscores the value of accessibility and supportive teacher-student relationships in facilitating learning. Overall, the findings demonstrate that teachers' positive attitudes toward teaching are key determinants of students' academic performance in Biology.

Teachers' Professional Performance

S/N		N	Mean	Std. Deviation	Criterion Mean	Decision
1.	My teacher demonstrates good communication and instructional skills.	37	3.97	.957		Agree
2.	Teachers who prepare well before lessons improve students' performance.	37	4.35	.949		Agree
3.	Teachers' commitment to marking and giving feedback enhances learning.	37	4.43	.728		Agree
4.	Teachers' professionalism helps to maintain students' interest in Biology.	37	4.30	.740		Agree
5.	Poor professional conduct of teachers affects students' academic success.	37	4.14	1.084		Agree
	Grand Mean		**4.24**			

Author's Compilation 2025 (SPSS 27)

The findings on the effect of teachers' professional performance on students' academic performance in Biology reveals a strong consensus among respondents that professional conduct and dedication significantly influence learning outcomes. With a grand mean of 4.24, which is well above the criterion mean of 3.00, the results show that respondents generally agree with all the statements presented.

Respondents agreed that teachers demonstrate good communication and instructional skills (Mean = 3.97), and that teachers who prepare well before lessons improve students' performance (Mean = 4.35). This suggests that effective preparation and clear instructional delivery are perceived as essential for enhancing student learning.

Taken together, these findings results indicate that teachers' commitment to marking and providing feedback enhances learning (Mean = 4.43), and that teachers' professionalism helps maintain students' interest in Biology (Mean = 4.30). These findings highlight respondents' recognition of the importance of teacher diligence, consistency, and professional dedication in sustaining student engagement.

In line with this, respondents also agreed that poor professional conduct negatively affects students' academic success (Mean = 4.14), underscoring the adverse effects of unprofessional behavior on learning outcomes. Overall, the findings demonstrate that teachers' professional performance plays a critical role in determining students' academic achievement in Biology.

Teachers' Classroom Management Skills

S/N		N	Mean	Std. Deviation	Criterion Mean	Decision
1.	My teacher maintains discipline and order during Biology classes.	37	3.95	1.129	3.00	Agree
2.	Teachers' ability to control the class helps improve students' concentration.	37	4.43	.835	3.00	Agree
3.	A well-managed classroom creates a better learning environment for Biology.	37	4.54	.730	3.00	Agree
4.	Poor classroom management leads to distractions and low performance.	37	4.30	.661	3.00	Agree
5.	Teachers who organize class activities effectively enhance learning outcomes.	37	4.43	.801	3.00	Agree
	Grand Mean		**4.33**			

Author's Compilation 2025 (SPSS 27)

The findings on the effect of teachers' classroom management skills on students' academic performance in Biology reveals a strong consensus among respondents that effective classroom management significantly enhances learning outcomes. With a grand mean of 4.33, which is well above the criterion mean of 3.00, the results show that respondents generally agree with all the statements presented.

Specifically, respondents agreed that teachers maintain discipline and order during Biology classes (Mean = 3.95), and that teachers' ability to control the class helps improve students' concentration (Mean = 4.43). This suggests that a well-disciplined classroom enables students to focus better and engage meaningfully with the lesson content.

Furthermore, the results indicate that a well-managed classroom creates a better learning environment for Biology (Mean = 4.54), and that poor classroom management leads to distractions and low performance (Mean = 4.30). These findings highlight respondents' recognition of the importance of organization and structured learning settings in promoting academic success.

In line with this, respondents also agreed that teachers who organize class activities effectively enhance learning outcomes (Mean = 4.43), underscoring the role of systematic lesson delivery and activity management in improving students' understanding and performance. Overall, the findings demonstrate that teachers' classroom management skills are a critical factor in determining students' academic achievement in Biology.

Regression analysis

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.139[a]	.019	-.103	.860	.019	.157	4	32	.958

Author's Compilation 2025 (SPSS 27)

The results presented in the Model Summary demonstrate that the regression model is not statistically robust in explaining the relationship between teachers' characteristics and students' academic performance in Biology. The correlation coefficient (R = 0.139) indicates a very weak positive relationship between the independent variables—teachers' academic qualification, teaching methods, attitude

toward teaching, professional performance, and classroom management—and the dependent variable, students' academic performance.

The R^2 value of 0.019 shows that only 1.9% of the variation in students' academic performance can be explained by the combined teachers' characteristics included in the model. This proportion is very small, suggesting that these teacher-related factors, collectively, have minimal influence on student outcomes. The adjusted R^2 value of -0.103 further emphasizes that, after accounting for the number of predictors and sample size, the model does not adequately explain the variability in students' performance. The unexplained 98.1% of the variance may be due to other factors not included in the study, such as student motivation, parental support, school resources, or classroom environment.

The standard error of estimate (0.860) indicates that the predicted values from the model are not particularly close to the actual observed student performance, pointing to low accuracy in the regression predictions. Furthermore, the F-statistic (0.157) with a significance level of 0.958 shows that the overall model is not statistically significant at the 5% level. This implies that, taken together, teachers' characteristics do not reliably predict students' academic performance in Biology, and the likelihood of this result occurring by chance is high.

In practical terms, this result suggests that while teachers' qualifications, teaching methods, attitudes, professional performance, and classroom management may have some influence, they are not sufficient to significantly impact student achievement in Biology in the selected senior secondary schools in Egor LGA. Other factors outside the

scope of this study may play a more dominant role in determining students' academic outcomes.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.464	4	.116	.157	.958[b]
	Residual	23.644	32	.739		
	Total	**24.108**	**36**			

Author's Compilation 2025 (SPSS 27)

The ANOVA results test the overall significance of the regression model. The regression sum of squares (0.464) compared to the total sum of squares (24.108) shows that only a very small portion of the variation in students' academic performance in Biology is explained by the independent variables—teachers' academic qualifications, teaching methods, attitude toward teaching, professional performance, and classroom management. The residual sum of squares (23.644) represents the variation left unexplained by the model.

The F-statistic of 0.157, with an associated significance value of 0.958, indicates that the regression model is not statistically significant at the 5% level. This means that, collectively, the predictors included in the model do not have a meaningful effect on students' academic performance in Biology. In other words, the probability that this result occurred by chance is very high, providing no evidence against the null hypothesis that the model has no explanatory power.

The implication is that the set of teacher characteristics under study—academic qualifications, teaching methods, attitudes toward teaching, professional performance,

and classroom management—do not jointly exert a significant influence on the students' academic performance in the selected senior secondary schools in Egor LGA. This result aligns with the findings from the model summary, reinforcing that, in this context, the regression model is neither statistically significant nor practically meaningful in explaining variations in Biology performance.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.877	.707		5.487	.000
	Teachers' Teaching Methods	.091	.224	.109	.404	.689
	Teachers' Attitude Toward Teaching	.001	.150	.001	.007	.995
	Teachers' Professional Performance	-.008	.254	-.010	-.032	.974
	Teachers' Classroom Management Skills	.034	.248	.048	.139	.890

a. Dependent Variable: Teachers' Academic Qualification

The coefficients table provides insight into the individual influence of each teachers' characteristic on students' academic performance in Biology. The constant term (β = 3.877, p = 0.000) is statistically significant, indicating that when all predictors are held at zero, the baseline level of the dependent variable (students' academic performance) is 3.877.

Teachers' Teaching Methods (B = 0.091, β = 0.109, t = 0.404, p = 0.689) is not statistically significant. This implies that the teaching methods employed by teachers do not meaningfully influence students' academic performance in the sampled schools.

Teachers' Attitude Toward Teaching (B = 0.001, β = 0.001, t = 0.007, p = 0.995) is also statistically insignificant, suggesting that variations in teachers' enthusiasm, dedication, or interest in teaching do not have a measurable effect on students' academic outcomes.

Teachers' Professional Performance (B = -0.008, β = -0.010, t = -0.032, p = 0.974) shows a very weak negative coefficient and is not significant, indicating that professional performance, including lesson preparation and feedback provision, does not significantly affect students' performance in Biology.

Teachers' Classroom Management Skills (B = 0.034, β = 0.048, t = 0.139, p = 0.890) is likewise statistically insignificant, implying that teachers' ability to maintain order and organize classroom activities does not have a discernible impact on student performance in this study.

In summary, the regression results suggest that none of the teachers' characteristics examined—teaching methods, attitude toward teaching, professional performance, or classroom management skills—have a statistically significant effect on students' academic performance in Biology within the selected senior secondary schools in Egor LGA. This aligns with the earlier model summary and ANOVA results, which indicated very low explanatory power ($R^2 = 0.019$) and a non-significant overall model (F = 0.157,

p = 0.958). The findings imply that other factors beyond the teachers' characteristics measured may be more critical in influencing student performance.

Test of Hypotheses

Hypothesis One

Teachers' Academic Qualifications Do Not Significantly Influence Students' Academic Performance In Biology.

The regression results show that teachers' academic qualifications were not statistically significant in influencing students' academic performance, as indicated by the overall model ($R^2 = 0.019$, $F = 0.157$, $p = 0.958$). Since the p-value is much greater than the 0.05 threshold, the null hypothesis cannot be rejected. This indicates that teachers' academic qualifications do not have a statistically significant effect on students' performance in Biology in the selected schools. In practical terms, this suggests that other factors beyond academic qualifications may be more influential in determining student outcomes.

Hypothesis Two

Teachers' Teaching Methods Do Not Significantly Influence Students' Academic Performance In Biology.

The regression results show that teachers' teaching methods have an unstandardized coefficient (B) of 0.091, with a t-value of 0.404 and a significance level of 0.689. Since the p-value exceeds 0.05, the null hypothesis cannot be rejected. This implies that the teaching methods employed by teachers do not have a statistically significant effect on students' academic performance in Biology in this study.

Hypothesis Three

Teachers' Attitudes Toward Teaching Do Not Significantly Affect Students' Academic Performance In Biology.

The regression results indicate that teachers' attitudes toward teaching have an unstandardized coefficient (B) of 0.001, with a t-value of 0.007 and a significance level of 0.995. Given that the p-value is far above 0.05, the null hypothesis cannot be rejected. This shows that teachers' attitudes toward teaching do not significantly affect students' performance in Biology in the selected schools.

Hypothesis Four

Teachers' Professional Performance Does Not Significantly Influence Students' Academic Performance In Biology.

The regression results show that teachers' professional performance has an unstandardized coefficient (B) of -0.008, with a t-value of -0.032 and a significance level of 0.974. Since the p-value is greater than 0.05, the null hypothesis cannot be rejected. This indicates that professional performance, as measured in this study, does not significantly influence students' academic performance in Biology.

Hypothesis Five

Teachers' Classroom Management Skills Do Not Significantly Affect Students' Academic Performance In Biology.

The regression results show that teachers' classroom management skills have an unstandardized coefficient (B) of 0.034, with a t-value of 0.139 and a significance level

of 0.890. Since the p-value exceeds 0.05, the null hypothesis cannot be rejected. This suggests that classroom management skills do not have a statistically significant effect on students' academic performance in Biology in the sampled schools.

Discussion of Findings

The findings of this study provide valuable insights into how teachers' characteristics influence students' academic performance in Biology. The regression analysis revealed that none of the examined teacher characteristics—academic qualifications, teaching methods, attitudes toward teaching, professional performance, and classroom management skills—had a statistically significant effect on students' performance.

The results indicated that teachers' academic qualifications, although perceived by students as important for effective teaching, did not significantly enhance academic outcomes (B = not significant, $p > 0.05$). This aligns with prior research suggesting that while higher qualifications provide theoretical knowledge, they may not directly translate into improved student performance without effective application in pedagogical practice (Darling-Hammond, 2000; Hanushek, 2011). The finding underscores the notion that academic credentials alone are insufficient to guarantee improved learning outcomes.

Similarly, teachers' teaching methods were found to have no significant impact on students' performance ($B = 0.091$, $p = 0.689$). Although descriptive results showed that students valued interactive methods, practical demonstrations, and visual aids, these methods did not translate into measurable academic gains. This finding resonates with studies that emphasize the importance of student engagement, learning resources, and

motivation as mediating factors in the effectiveness of teaching strategies (Hattie, 2009; Marzano, 2003).

Teachers' attitudes toward teaching were also not significant (B = 0.001, p = 0.995). Despite students' perceptions that enthusiastic, approachable, and dedicated teachers enhance learning experiences, the regression results suggest that attitude alone does not sufficiently influence performance outcomes. This supports the view that while teacher motivation may inspire students, other structural or contextual factors, such as school resources, class size, and students' study habits, play a more direct role in determining achievement (OECD, 2014).

Professional performance, encompassing lesson preparedness, feedback, and commitment, did not show a significant effect on students' academic outcomes (B = -0.008, p = 0.974). This indicates that, although professional conduct is critical for maintaining classroom discipline and instructional quality, it may not independently enhance measurable student performance. This finding echoes previous research highlighting the multifaceted nature of student achievement, where teacher performance interacts with student effort, curriculum quality, and parental support (Stronge, 2018).

Lastly, classroom management skills were found to be insignificant (B = 0.034, p = 0.890), even though students acknowledged that well-managed classrooms promote a better learning environment. This suggests that effective classroom control and organization, while necessary for minimizing distractions, are not sufficient on their own to significantly influence academic performance. This result is consistent with literature

emphasizing that classroom management is a foundational element that facilitates learning but does not automatically produce higher achievement (Emmer & Sabornie, 2015).

Taken together, these findings indicate that teachers' characteristics, while important for creating conducive learning conditions, do not directly predict students' academic performance in Biology within the selected schools. The results highlight the need to consider additional factors—such as student motivation, learning resources, socio-economic background, and parental involvement—as critical determinants of academic success. This evidence supports the broader argument in educational research that teacher quality is multidimensional and that improving student outcomes requires a holistic approach rather than reliance on individual teacher traits alone.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Introduction

This chapter presents the summary of findings, conclusions, and recommendations based on the study titled "Influence of Teachers' Characteristics on Students' Academic Performance in Biology in Selected Senior Secondary Schools in Egor LGA." The study investigated the effect of teachers' characteristics—including academic qualifications, teaching methods, attitudes toward teaching, professional performance, and classroom management skills—on students' performance in Biology. The chapter summarizes key findings from the analysis, draws conclusions, and provides recommendations for educational stakeholders to improve academic outcomes.

Summary of Findings

The study employed a descriptive survey design with 37 respondents (20 students and 17 teachers) from 13 selected public senior secondary schools in Egor LGA. Data were collected through a structured questionnaire and analyzed using descriptive statistics and multiple regression analysis. The key findings are summarized as follows:

1. **Teachers' Academic Qualifications**
   - Respondents generally agreed that teachers' qualifications positively influence Biology teaching.
   - The grand mean for teachers' academic qualifications was 3.95, above the criterion mean of 3.00.

- However, regression analysis revealed that academic qualifications did not significantly affect students' academic performance (B = not significant, $p > 0.05$).

2. **Teachers' Teaching Methods**

- Students acknowledged that interactive methods, practical demonstrations, and visual aids improve understanding (grand mean = 3.88).
- Despite this, teaching methods did not significantly influence students' academic outcomes (B = 0.091, $p = 0.689$).

3. **Teachers' Attitude Toward Teaching**

- Positive attitudes, enthusiasm, and dedication were recognized by students as motivating factors (grand mean = 3.88).
- Regression results, however, showed no significant impact on performance (B = 0.001, $p = 0.995$).

4. **Teachers' Professional Performance**

- Professional conduct, preparedness, and feedback provision were rated highly by respondents (grand mean = 4.24).
- No significant effect on academic performance was observed (B = -0.008, $p = 0.974$).

5. **Teachers' Classroom Management Skills**

- Classroom discipline, organization, and management of activities were valued (grand mean = 4.33).

- Regression analysis indicated that classroom management skills had no significant effect on students' performance (B = 0.034, p = 0.890).

Overall, the study revealed that while students perceive teachers' characteristics as important for effective teaching, these characteristics alone did not significantly predict academic performance in Biology within the sampled schools.

Conclusion

Based on the findings, it can be concluded that:

- Teachers' characteristics, including academic qualifications, teaching methods, attitudes, professional performance, and classroom management skills, create a positive learning environment but are not significant determinants of students' academic performance in Biology.
- Student performance is likely influenced by a combination of factors beyond teachers' characteristics, including student motivation, learning resources, socio-economic background, and parental support.
- Improving students' academic outcomes requires a holistic approach that combines teacher quality with other educational and environmental interventions.

Recommendations

In light of the findings, the following recommendations are made:

1. **For Teachers**

- Teachers should not only rely on their qualifications but actively adopt innovative and student-centered teaching strategies that engage learners in practical and participatory activities.
- Continuous professional development should be encouraged to enhance pedagogical skills and classroom management abilities.

2. **For School Administrators**

- Schools should provide adequate teaching and learning resources, including laboratory equipment, visual aids, and instructional materials, to complement teachers' efforts.
- Supportive school environments should be promoted to ensure that teacher efforts are translated into measurable student performance.

3. **For Policy Makers and Education Authorities**

- Policies should target comprehensive teacher training programs that integrate practical teaching strategies with subject mastery.
- Emphasis should be placed on holistic interventions that consider student motivation, learning environments, and parental engagement to enhance academic achievement.

4. **For Future Research**

- Future studies could investigate additional factors influencing students' academic performance, such as students' learning habits, parental involvement, and school infrastructure.
- Comparative studies across multiple subjects and schools could provide broader insights into the relative importance of teacher characteristics.

Summary

In conclusion, while teachers' characteristics positively contribute to the learning environment in Biology classrooms, this study shows that they are not sufficient on their own to significantly influence academic performance in Egor LGA. Educational stakeholders should adopt a multi-faceted approach, combining teacher quality improvements with student-centered interventions and adequate learning resources to achieve meaningful academic outcomes.

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APPENDIX

QUESTIONNAIRE

Department of Curriculum and Instructional Technology (C.I.T)

Faculty of Education

University of Benin, Benin City

Dear Participant,

My name is Chinonyerem MaryJane Ogbonna, a student of the above department, conducting a research study titled "Influence of Teachers' Characteristics on Students' Academic Performance in Biology in Selected Senior Secondary Schools in Egor LGA."

The purpose of this questionnaire is to obtain information on how teachers' characteristics such as academic qualification, teaching methods, attitude toward teaching, professional performance, and classroom management skills influence students' academic performance in Biology. Please respond to the questions as honestly as possible. Your participation is voluntary, and all responses will be treated with strict confidentiality.

Thank you for your time and cooperation.

Yours Faithfully,

Chinonyerem MaryJane Ogbonna

Section A: Demographic Information

Gender: Male [ ] Female [ ]

Age:

14 – 15 years [ ]

16 – 25 years [ ]

26 – 35 years [ ]

35 years and above [ ]

Class Level: SSS [ ], SSS2 [ ], SSS3 [ ]

Name of School:_____

Section B: Respondents' Responses

Key:

SA – Strongly Agree A – Agree U – Undecided D – Disagree SD – Strongly Disagree

Research Question 1: Teachers' Academic Qualification

S/N	ITEMS	SA	A	U	D	SD
1.	Teachers with higher academic qualifications teach Biology more effectively.					
2.	My Biology teacher's level of education positively influences my performance.					
3.	Teachers with specialized training in Biology help students understand better.					
4.	Teachers with professional qualifications use better teaching techniques.					
5.	Lack of adequate teacher qualification negatively affects Biology performance.					

Research Question 2: Teachers' Teaching Methods

S/N	ITEMS	SA	A	U	D	SD
6.	My teacher uses teaching methods that make Biology lessons interesting.					
7.	Use of practical demonstrations helps me understand Biology concepts better.					
8.	My teacher encourages class participation during Biology lessons.					
9.	The use of visual aids enhances my understanding of Biology topics.					
10.	Poor teaching methods reduce my interest in learning Biology.					

Research Question 3: Teachers' Attitude Toward Teaching

S/N	ITEMS	SA	A	U	D	SD
11.	My teacher shows enthusiasm and passion when teaching Biology.					
12.	A positive attitude from my teacher motivates me to study Biology.					
13.	Teachers who are dedicated and punctual inspire better student performance.					
14.	Teachers' lack of interest in teaching affects my motivation to learn Biology.					
15.	Teachers who are approachable make learning Biology easier.					

Research Question 4: Teachers' Professional Performance

S/N	ITEMS	SA	A	U	D	SD
16.	My teacher demonstrates good communication and instructional skills.					
17.	Teachers who prepare well before lessons improve students' performance.					
18.	Teachers' commitment to marking and giving feedback enhances learning.					
19.	Teachers' professionalism helps to maintain students' interest in Biology.					
20.	Poor professional conduct of teachers affects students' academic success.					

Research Question 5: Teachers' Classroom Management Skills

S/N	ITEMS	SA	A	U	D	SD
21.	My teacher maintains discipline and order during Biology classes.					
22.	Teachers' ability to control the class helps improve students' concentration.					
23.	A well-managed classroom creates a better learning environment for Biology.					
24.	Poor classroom management leads to distractions and low performance.					
25.	Teachers who organize class activities effectively enhance learning outcomes.					

Thank you for your sincere participation!