IMPACT OF SCHOOL ENVIRONMENT ON STUDENTS ACADEMIC PERFORMANCE IN INTEGRATED SCIENCE IN EGOR LOCAL GOVERNMENT AREA

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BENIN CITY.

OCTOBER, 2025.

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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 EDUCATION DEGREE IN INTEGRATED SCIENCE EDUCATION B.Sc. (Ed).

OCTOBER, 2025.

CERTIFICATION

This is to certify that this research project was carried out by **Mercy Omeghe OKHINEMOYAH** with matriculation number **EDU2102137** in the Department of Curriculum and instructional Technology, Faculty of Education, University of Benin, Benin City.

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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 and aspirations. He has been my source of strength and on his wings only I have soared.

ACKNOWLEDGEMENTS

The researcher will like to acknowledge the valuable support and guidance provided by her project Supervisor Mrs. E.I Essien throughout the course of this project. Her expertise and insights were crucial in shaping the direction and outcome of this work. She would also like to express her gratitude to her parents Mr. and Mrs. Okhinemoyah whose input and collaboration enhanced the quality of this project. Additionally, she extends her thanks to her siblings for their unwavering encouragement during this endeavour.

Also, she wants to specially appreciate her friends for their support and academic contribution all throughout her stay in the University. She cannot conclude this without expressing her heartfelt gratitude to her HOD, Prof. F. O. Idehen and her lecturers without whom she wouldn't have reached this milestone, she would like to specially mention her course advisers who guided her from her 100level to her 400level in persons of Dr. Pedro, Dr. Ahanor, Mrs. Ehiede, Dr. R. O. Uzamere of blessed memory for their support, guidance, mentorship and encouragement which helped her stay focused and motivated.

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Abstract

This study examined the impact of the school environment on the academic performance of students in Integrated Science in selected public secondary schools in Egor Local Government Area of Edo State, Nigeria. A descriptive survey research design was adopted, with a target population of 600 Junior Secondary School students and their Integrated Science teachers. Using Taro Yamane's sampling formula, a total of 150 students and 14 teachers were drawn from seven purposively selected schools. Data were collected through a structured questionnaire titled School Environment and Students' Academic Performance in Integrated Science Questionnaire (SESAQ). The instrument was validated by lecturers in the department of curriculum and instructional technology while its reliability was confirmed with a Cronbach's Alpha coefficient of 0.84. Out of the 164 copies of the questionnaire distributed, 151 were duly completed and retrieved, giving a response rate of 92%. Data analysis was carried out using descriptive statistics (frequency, mean, and standard deviation) and inferential statistics (correlation and regression analysis).

Findings revealed that key elements of the school environment including classroom infrastructure, availability and utilization of instructional materials, teacher qualifications and attitudes, and overall school climate significantly influenced students' academic performance in Integrated Science. The study concluded that a conducive and well-resourced school environment is crucial for enhancing students' learning outcomes. It was recommended that government, school administrators, and stakeholders provide adequate instructional resources, improve teacher professional development, and foster a supportive school climate that promotes effective teaching and learning in Integrated Science.

CHAPTER ONE

INTRODUCTION

Background to the Study

The school environment is a fundamental factor influencing students' learning and academic performance across all levels of education. It comprises the physical infrastructure, psychosocial atmosphere, instructional resources, and overall school climate that create the conditions under which teaching and learning occur. A conducive school environment has been widely recognized as essential for promoting student engagement, cognitive development, and academic achievement (Alenoghena & Omoregie, 2023). In the context of science-related subjects such as Integrated Science, the need for well-equipped laboratories, instructional materials, and supportive teacher-student interactions is even more pronounced. These factors collectively influence how effectively scientific knowledge is transmitted and how well students internalize complex scientific concepts.

In Nigeria, and particularly within Egor Local Government Area of Edo State, increasing concerns have been raised about the poor state of school environments, especially in public secondary schools. A recent survey by the Universal Basic Education Commission (UBEC, 2022) revealed that over 48% of public secondary schools in Edo State operate in buildings classified as substandard, with broken windows, leaky roofs, and overcrowded classrooms. Specifically, in Egor LGA, many schools lack basic science

laboratory facilities, with only 3 out of 10 junior secondary schools having functional science laboratories (Edo State Ministry of Education, 2023). These conditions directly affect the quality of teaching and learning in Integrated Science and may explain the persistent underperformance of students in the subject.

Integrated Science is a core subject at the junior secondary school level in Nigeria, intended to lay the foundation for scientific thinking and to encourage students to pursue science-related fields in higher education. According to the National Examinations Council (NECO, 2023), the national pass rate for Basic Education Certificate Examination (BECE) in Integrated Science dropped from 64.2% in 2020 to 59.7% in 2022, reflecting a concerning trend. In Edo State, performance figures were slightly lower than the national average, with Egor LGA recording an average pass rate of 52.4% in 2022, which is attributed by educators to inadequate school environments and lack of instructional resources (Osadolor & Ibhiedu, 2023).

Numerous studies have established the relationship between school environment and student achievement. For instance, Akinyemi and Jegede (2021) found that students in well-resourced and structurally sound schools in Lagos performed significantly better in science subjects than their peers in poorly maintained schools. Similarly, Olatunji et al. (2023) reported that the presence of functional laboratories, science kits, and visual aids improved students' understanding and retention in Integrated Science by up to 38%, compared to schools lacking such facilities. This comparative evidence underscores the

importance of investing in school infrastructure and learning materials, particularly for science education.

Furthermore, the school environment also affects teacher morale and effectiveness. Teachers working in dilapidated, noisy, or overcrowded classrooms often experience job dissatisfaction, reduced instructional quality, and burnout, which in turn affects students' academic progress (Amoako & Essien, 2022). A poor school climate characterized by insecurity, lack of discipline, or administrative inefficiency can also diminish students' motivation and attendance rates.

Given the importance of Integrated Science as a gateway subject for STEM (Science, Technology, Engineering, and Mathematics) careers, and the prevailing environmental challenges in schools within Egor Local Government Area, it becomes imperative to empirically investigate how these environmental factors influence academic performance. By identifying specific aspects of the school environment such as classroom design, access to science resources, teacher competence, and overall school culture this study seeks to generate actionable insights for educators, policymakers, and stakeholders. These insights can contribute to improving the learning environment and enhancing the academic performance of students in Integrated Science in public secondary schools within Egor LGA of Edo State.

Statement of the Problem

Despite the centrality of science education to national development and technological advancement, the academic performance of Nigerian students in science subjects particularly Integrated Science remains a source of concern. Numerous studies have established a link between the school environment and student achievement, yet many Nigerian schools continue to operate under poor environmental conditions, thereby impeding effective teaching and learning processes.

For instance, Akinyemi and Jegede (2021) observed that students in well-maintained schools in Lagos State outperformed those in poorly maintained facilities, indicating a strong correlation between infrastructural adequacy and academic performance in science subjects. Similarly, Olatunji et al. (2023) found that schools with adequate laboratory equipment and modern instructional materials recorded higher student performance in Integrated Science compared to schools lacking these resources. Furthermore, Alenoghena and Omoregie (2023) emphasized that psychological factors such as overcrowding, noise, and lack of classroom control significantly influence students' attention span and retention ability in science classes.

While these studies have contributed meaningfully to our understanding of how school environment affects science learning, a noticeable gap persists. Most existing research has adopted a generalized or state-wide perspective without delving into localized educational challenges such as those experienced in Egor Local Government Area of Edo

State. In addition, many studies focus solely on infrastructure or instructional materials, often neglecting the combined influence of psychosocial factors, teacher attitudes, and school climate variables that also critically shape student learning outcomes in Integrated Science.

This study seeks to fill this gap by offering a context-specific investigation into how multiple dimensions of the school environment physical, instructional, and psychosocial jointly impact the academic performance of Junior Secondary School students in Integrated Science within Egor LGA. By addressing a localized and holistic view of the learning environment, the study aims to generate actionable insights that are directly relevant to educational stakeholders and policymakers in the region. Unlike previous studies, this research uniquely combines empirical data from public secondary schools in Egor with a multi-variable framework that considers infrastructure, teaching aids, teacher competence, and school climate in a single model of analysis.

Research Questions

To guide the investigation, the following research questions are formulated:

1. To what extent does classroom infrastructure affect students' academic performance in Integrated Science?
2. How does the availability and use of instructional materials influence students' academic outcomes?

3. What is the impact of teacher qualifications and attitudes on students' performance in Integrated Science?

4. What is the relationship between school climate and students' academic achievement in Integrated Science?

Purpose of the Study

The primary purpose of this study is to examine the impact of the school environment on the academic performance of students in Integrated Science in public secondary schools in Egor Local Government Area. Specifically, the study aims to:

1. Examine the influence of classroom infrastructure on students' academic performance.

2. Assess the availability and use of instructional materials in teaching Integrated Science.

3. Determine the effect of teacher qualifications and attitudes on student achievement.

4. Explore the relationship between school climate and student academic performance.

Scope of the Study

This study specifically focuses on examining the impact of the school environment on the academic performance of students in Integrated Science in Egor Local Government Area of Edo State.

The study is delimited to Junior Secondary School (JSS) students (specifically JSS2 Students) as they are the primary recipients of Integrated Science instruction under Nigeria's Basic Education Curriculum. By concentrating on this educational level and subject, the study seeks to explore how various aspects of the school environment influence foundational science learning among adolescents.

By narrowing its focus to public junior secondary schools in Egor Local Government Area, the study aims to provide a localized, evidence-based understanding of how the school environment affects student achievement in Integrated Science. This targeted approach will also help inform the development of practical recommendations for educational stakeholders, including school administrators, teachers, policymakers, and curriculum planners in Edo State.

Significance of the Study

This study is of considerable significance to a wide range of educational stakeholders, including school administrators, government education authorities, teachers, curriculum developers, parents, and researchers. It addresses a critical issue affecting the

foundational learning of science subjects in Nigeria specifically the influence of the school environment on student academic performance in Integrated Science.

For school administrators, the findings of this study will offer empirical insights into the practical effects of infrastructural quality, classroom conditions, and resource availability on student outcomes. These insights can guide more informed decisions regarding the allocation of school budgets, prioritization of infrastructural renovations, seating arrangements, classroom sizes, and general environmental improvements aimed at creating more conducive learning spaces.

For government education authorities and policymakers, the study will provide concrete data that can support the formulation of targeted policies and initiatives aimed at improving science education in public secondary schools. At a time when national strategies such as the Education for Change: A Ministerial Strategic Plan (2018–2022) and Nigeria's Vision 2030 are placing emphasis on STEM education, the study's findings can contribute to the national dialogue on how to bridge performance gaps through environmental reform. It can further inform policy recommendations on teacher recruitment, laboratory funding, curriculum delivery, and infrastructural investment.

For teachers and curriculum developers, the study will offer valuable perspectives on how the school environment, including access to instructional materials and classroom dynamics, affects teaching effectiveness and student engagement. Teachers will be better equipped to adapt their methods to suit the realities of their teaching environments.

Curriculum planners may also use the findings to propose content and teaching strategies that are responsive to the infrastructural realities of schools in areas such as Egor Local Government.

The parents and guardians of students also stand to benefit from the implications of this study, as it highlights how non-academic factors such as noise levels, ventilation, lighting, and even teacher attitudes can directly affect their children's academic progress. This may spur community involvement and advocacy for better school conditions through Parent-Teacher Associations (PTAs) and community development initiatives.

Additionally, for researchers and scholars, this study contributes to the growing body of academic literature on environmental determinants of learning outcomes in science education. While many existing studies have focused on broader educational issues, this research provides a localized and multi-dimensional perspective on how physical, instructional, and psychological elements of the school environment interact to affect student achievement in Integrated Science. It helps to close the gap in location-specific research and offers a model that could be adapted for other subject areas or regions facing similar challenges.

Ultimately, the long-term significance of this study lies in its potential to serve as a blueprint for educational improvement not only in Egor Local Government Area but also in other parts of Nigeria and Sub-Saharan Africa where similar environmental and educational challenges persist. By identifying the specific environmental factors that

influence student success, the study can drive evidence-based reforms that promote equitable and quality education for all, in alignment with Sustainable Development Goal 4 (SDG 4) quality education.

Operational Definition of Terms

- **School Environment**: All physical, instructional, and interpersonal conditions present within the school that influence learning.
- **Academic Performance**: The measurable achievement of students in Integrated Science based on scores from tests and assessments.
- **Integrated Science**: A subject in junior secondary school that integrates concepts from biology, chemistry, and physics.
- **Instructional Materials**: Teaching and learning tools including textbooks, charts, lab equipment, and audio-visual aids used in science instruction.
- **School Climate**: The overall atmosphere and social interactions in a school that affect student behavior and performance.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The school environment is a key external factor influencing students' academic outcomes. In practical-based subjects like Integrated Science, the quality of the learning environment plays a vital role in shaping how students engage with and retain scientific knowledge. Research from Nigeria and other developing countries shows that factors such as infrastructure, teaching resources, and classroom conditions significantly affect performance. This chapter reviews:

- Conceptual clarification
- School Environment
- Academic Performance
- Classroom Infrastructure and Academic Performance
- Instructional Materials and Academic Performance
- Teacher Attributes and Academic Performance
- School Climate and Academic Performance
- Summary of Literature Reviewed

Conceptual Clarification

School Environment

The school environment encompasses all internal and external conditions within the school that influence teaching and learning processes. It includes physical infrastructure such as classrooms, laboratories, libraries, and sanitation facilities, as well as psychological and social components like the quality of relationships among students, teachers, and administrators. In addition, instructional factors such as the availability and utilization of teaching materials, teacher qualifications, pedagogical practices, and the overall school climate are central to shaping students' academic experiences and outcomes.

A conducive school environment creates a supportive atmosphere that enhances learners' interest, concentration, and motivation toward academic achievement. Ajayi (2017) notes that schools with functional classrooms, adequate ventilation, sufficient lighting, and good seating arrangements often witness increased student participation and better academic results. Uline and Tschannen-Moran (2008) emphasize that the physical condition of school facilities has a direct effect on the emotional and academic well-being of students, suggesting that dilapidated structures and overcrowded classrooms may lead to stress, absenteeism, and disengagement from learning.

Recent studies continue to reinforce the critical role of the school environment in promoting educational outcomes. For instance, Akinyemi and Jegede (2021) found that

students who learn in clean, well-maintained environments tend to show greater enthusiasm and discipline in their academic work. Furthermore, Alenoghena and Omoregie (2023) demonstrated that positive school environments foster not just academic success but also emotional and social development, particularly in science-related subjects like Integrated Science.

In Nigeria, disparities in school environments—particularly between urban and semi-urban or rural areas—have been identified as major contributors to uneven student performance (UBEC, 2022). Many public schools, especially in areas like Egor Local Government Area, suffer from inadequate learning spaces, insufficient teaching aids, and a shortage of qualified teachers, all of which negatively affect student outcomes in science subjects.

Thus, the school environment is not merely a backdrop for learning but an active component in shaping educational experiences. When students are placed in environments that support their learning both physically and psychologically they are more likely to succeed academically. Conversely, poorly maintained school environments serve as barriers to achievement and may reinforce educational inequality.

Academic Performance

Academic performance: refers to the extent to which students achieve learning objectives, often measured through various forms of assessment such as assignments, tests,

continuous assessments, and formal examinations. It is a core indicator of the effectiveness of both instructional delivery and the learning environment. In the context of secondary education, particularly in science subjects like Integrated Science, academic performance reflects students' grasp of scientific theories, their ability to apply concepts, and their competency in carrying out practical tasks.

Academic performance is influenced by a wide range of school-related factors, including the quality of teaching, availability of learning resources, school infrastructure, teacher-student interactions, and the overall climate of the school (Alenoghena & Omoregie, 2023). According to Olatunji, Ojo, and Ogunleye (2023), students' academic outcomes are significantly enhanced when teachers use diverse instructional materials and maintain student-centered teaching approaches. The study noted a strong positive correlation between the use of laboratory equipment and higher test scores in Integrated Science.

Moreover, Amoako and Essien (2022) observed that teacher qualifications and experience play a pivotal role in shaping students' academic results. Their findings showed that students taught by teachers with subject-matter expertise in science demonstrated better retention and understanding of scientific concepts than those taught by general subject teachers.

In Nigeria, concerns over students' poor academic performance in science subjects, especially at the junior secondary level, continue to grow. Reports from the National Examinations Council (NECO, 2023) reveal that the average performance of students in

Basic Education Certificate Examination (BECE) Integrated Science remains below expectations in many public schools. This underperformance has been linked to inadequacies in school environment components such as lack of laboratories, overcrowded classrooms, teacher absenteeism, and insufficient learning materials (UBEC, 2022). Furthermore, the Edo State Ministry of Education (2023) identified variations in student performance across schools in Egor Local Government Area, attributing them to disparities in classroom infrastructure, teaching quality, and access to practical resources. Schools with well-organized academic environments such as Iyoba Girls' College and Adolor College were reported to produce better results in Integrated Science than those with limited resources like Evbuotubu Secondary School.

Therefore, academic performance in Integrated Science is not only a reflection of students' intellectual capabilities but also a product of how conducive and well-resourced the school environment is. To enhance performance, especially in science education, attention must be given to improving both instructional delivery and the physical and emotional conditions in which students learn.

Classroom Infrastructure and Academic Performance

Classroom infrastructure plays a fundamental role in shaping students' academic experiences and outcomes. It includes the physical characteristics of the learning space such as classroom size, seating arrangement, ventilation, lighting, flooring, ceiling condition, and the general state of maintenance. A well-structured and safe learning

environment not only facilitates concentration and engagement but also reduces stress, noise, and distractions that could affect students' performance.

Akinyemi and Jegede (2021) emphasize that a clean, properly ventilated, and spacious classroom supports active learning and better interaction between teachers and students, especially in practical-based subjects like Integrated Science. Their study in public junior secondary schools in Lagos State revealed a strong positive relationship between well-maintained classroom infrastructure and students' performance in science, with students in adequately furnished classrooms scoring significantly higher on standardized tests than their counterparts in poorly maintained schools.

In Egor Local Government Area of Edo State, the condition of classroom infrastructure varies widely among public schools. While some schools like Adolor College and Useh Secondary School operate in overcrowded and poorly ventilated classrooms with cracked walls and broken desks, others have made modest improvements in infrastructure but still fall short of national standards. These infrastructural limitations hinder effective teaching and learning, especially in subjects requiring visual and spatial attention like Integrated Science. Students in such environments often report difficulty concentrating, inadequate comfort during lessons, and limited interaction during experiments, all of which impact academic performance.

Recent data from the Edo State Ministry of Education (2023) show that schools with improved classroom facilities recorded better performance in Integrated Science in the

2023 BECE, supporting the assertion that infrastructure quality is a determinant of academic success.

Instructional Materials and Academic Performance

Instructional materials are the tools and resources used by teachers to deliver content and by students to enhance understanding of academic subjects. These include textbooks, diagrams, models, chalkboards, laboratory apparatus, audio-visual media, and digital learning resources. In Integrated Science education, where abstract concepts must often be demonstrated visually or experimentally, access to relevant instructional materials is critical.

Olatunji, Ojo, and Ogunleye (2023) assert that instructional materials are essential for making science concepts more tangible and engaging for learners. Their comparative analysis found that students in well-resourced schools scored an average of 35% higher in Integrated Science than students from under-resourced schools. The use of instructional aids helped students grasp difficult scientific processes and encouraged participation during science lessons.

In Egor Local Government Area, the availability and quality of instructional materials are inconsistent. For example, schools like Iyoba Girls' College have moderate access to laboratory equipment and visual aids, allowing for better student participation in Integrated Science practicals. In contrast, schools such as Evbuotubu Secondary School

and Uselu Secondary School frequently report a lack of science kits, standard textbooks, or demonstration models. This inequality not only puts students at a disadvantage but also discourages hands-on learning, which is vital to the mastery of science subjects.

The Universal Basic Education Commission (UBEC, 2022) identified a shortage of science instructional materials as one of the leading causes of poor science achievement in Nigerian public schools. Moreover, inadequate materials often force teachers to rely solely on verbal explanations, which are less effective in helping students understand experimental and conceptual aspects of Integrated Science.

To ensure that students can meaningfully engage with the curriculum and develop core scientific competencies, it is imperative that public schools are equipped with modern and relevant instructional materials aligned with the National Policy on Education (FRN, 2014).

Teacher Attributes and Academic Performance

Teacher attributes refer to a combination of professional qualifications, subject-matter expertise, years of teaching experience, pedagogical skills, classroom management style, and the quality of teacher-student relationships. These attributes significantly influence how effectively learning occurs, especially in a subject like Integrated Science that demands conceptual clarity and practical demonstration.

Amoako and Essien (2022) emphasized that certified teachers with relevant academic and professional training in science education positively impact students' comprehension, participation, and retention of scientific knowledge. Their study, conducted across junior secondary schools in Southern Nigeria, showed that schools with a higher percentage of certified Integrated Science teachers recorded up to 25% better performance on standardized science assessments compared to schools relying on general subject teachers.

Beyond qualifications, the experience level of teachers has also been identified as a critical determinant of learning outcomes. According to Alenoghena and Omoregie (2023), teachers with over five years of teaching experience in science subjects are more likely to adopt diverse instructional strategies, provide better classroom control, and respond more effectively to students' learning needs.

In Egor Local Government Area, however, the shortage of qualified Integrated Science teachers remains a pressing concern. Many public schools, including Evbuotubu Secondary School and Useh Secondary School, report assigning Integrated Science to teachers trained in unrelated disciplines due to staffing gaps. This practice undermines content delivery, limits students' exposure to experimental science, and reduces their interest in pursuing science-based careers. It also leads to rote learning, where students memorize facts without true conceptual understanding—resulting in poor performance during examinations and practical tests.

School Climate and Academic Performance

School climate encompasses the collective beliefs, norms, values, interpersonal relationships, leadership style, and the general tone or atmosphere within a school. It influences how students feel about their school experience, their emotional well-being, sense of belonging, and willingness to participate in learning. A positive school climate is typically characterized by orderliness, inclusivity, mutual respect, motivation, and the presence of supportive systems for both students and teachers.

According to Osadolor and Ibhiedu (2023), school climate plays a significant role in determining students' academic behavior and outcomes, particularly in science subjects where students may feel discouraged in the absence of support. Their study of junior secondary schools in Edo State revealed that schools with proactive leadership, firm discipline, effective communication, and supportive teacher-student relationships had higher student retention and achievement in Integrated Science.

In Egor Local Government Area, there is a noticeable contrast in school climate across institutions. Schools like Uselu Secondary School and Iyoba Girls' College promote positive behavioral expectations, cooperative learning, and regular teacher feedback—factors which contribute to higher student attendance, better academic performance, and enhanced classroom engagement. Conversely, schools with poor leadership, minimal teacher accountability, frequent absenteeism, and incidents of student misconduct tend to experience reduced academic motivation and higher failure rates.

The Universal Basic Education Commission (UBEC, 2022) also identified poor school climate as a hidden but powerful contributor to learning gaps in public schools. They emphasized that without emotional safety, consistency, and a nurturing environment, even well-qualified teachers may struggle to make meaningful academic impact.

Empirical Reviews

Daramola (2023) conducted an ex-post facto study involving 68 second-year Integrated Science students across three tertiary institutions in Ekiti State. Using a combination of Environmental Factors Questionnaire and Performance Inventory, the study found a significant positive correlation ($r = 0.626$, $p < 0.05$) between school environment quality and students' academic performance. The findings highlighted that improved physical and instructional conditions within the school setting positively influenced learners' motivation and outcomes. It was recommended that government and institutional authorities prioritize the funding and equipping of learning environments to boost academic success, particularly in science-related courses.

Hamza, Aliyu, Bagudu, and Rawayau (2023) carried out a descriptive survey with 370 Senior Secondary School II Biology students from 25 public schools in Katsina State. Using the School Environment Students Questionnaire (SESQ) and an Academic Performance Scale (APS), they discovered that school building quality and classroom size had a significant influence on students' academic achievement. Pearson correlation analysis confirmed that students from well-maintained, adequately sized classrooms

performed better in science subjects. The researchers recommended that school authorities invest in modern infrastructure and maintain optimal classroom sizes for improved learning experiences.

Akinyemi, Gbesoevi, and Afolabi (2023) explored the relationship between classroom environment factors and student performance in junior secondary schools in Lagos State. Involving a sample of 250 students and using a combination of structured questionnaires and achievement tests, their study revealed strong positive correlations between several variables and academic performance—classroom organization ($r = 0.925$), use of instructional materials ($r = 0.745$), school climate ($r = 0.775$), and class size ($r = 0.829$). Based on these findings, the authors recommended that educational planners supply sufficient instructional resources and restructure classroom settings to create more conducive learning environments.

Oredein and Babalola (2020) examined how teacher professionalism and school facilities jointly influence student achievement in science subjects. Their study, conducted across 120 public secondary schools in Oyo State and involving 342 science teachers and 8,280 students, adopted a descriptive survey and multiple regression method. Results showed that the combination of professional teaching practices and adequate school infrastructure significantly predicted students' cognitive performance in science ($F_{1,340} = 16.786$, $p < 0.05$). They recommended continuous teacher development programs and infrastructure upgrades as strategies for enhancing student outcomes.

Okoi, Okoi, and Eteng (2022) investigated the influence of school environment on academic performance among 200 students in Calabar Metropolis. Using field surveys and structured questionnaires, the study found that poor ventilation, noise pollution, lack of science laboratories, and inadequate library resources were major obstacles to student achievement. The authors emphasized that the location and physical condition of schools play a crucial role in shaping students' learning experiences and outcomes, and called for better-equipped, safer, and more serene school environments.

Onodugo (2021) assessed the impact of school environment on student performance in public secondary schools within the Agbani Education Zone. The study utilized a descriptive survey approach involving 27,036 students from 45 schools. Findings indicated that the physical and social environment of schools—including sanitation, lighting, and classroom management—significantly influenced academic achievement. The researcher suggested that Parent-Teacher Associations and local governments collaborate in maintaining and upgrading school facilities to support student learning.

Gidado, Apeh, and Akinwande (2023) conducted a correlational study involving 398 senior secondary school students across schools in North Central Nigeria. While they observed a generally average performance in science subjects, the study found no strong direct relationship between the broader learning environment and academic achievement, indicating that other intervening variables like teaching style or student motivation may

also play important roles. Nonetheless, the study recommended environmental improvement and periodic teacher training as essential measures.

Osuntuyi (2022) investigated the effect of school environment on junior secondary school students' academic performance in Basic Technology in Ekiti State. The study sampled 200 students and employed Chi-square statistical analysis. Results showed that factors like classroom lighting, structural layout, and wall color significantly influenced student interest and achievement. The researcher concluded that the learning environment must be physically appealing and emotionally supportive to encourage student participation in technical subjects.

In another study by Daramola (2023) specifically focusing on Integrated Science in tertiary institutions, 68 undergraduates were surveyed to determine the relationship between school environment and academic performance. The study again confirmed a strong positive correlation between the quality of learning conditions and student performance. The researcher advocated for improved funding, better laboratory facilities, and an emotionally stimulating environment for effective science education.

Lastly, the work of Oredein and Babalola (2020) again showed that the combined influence of teacher quality and infrastructure was instrumental to student learning. Using a vast sample of over 8,000 students and 342 teachers, the findings demonstrated that teacher attributes such as training and dedication—alongside available resources like

science equipment and classroom amenities, had a statistically significant impact on students' academic success.

These empirical studies affirm the critical role of school environment particularly infrastructure, instructional resources, teacher quality, and school climate in shaping students' academic outcomes in science subjects. Despite the richness of available literature, many of the studies are either regionally limited or focus on isolated variables. Few have holistically addressed the interplay of these factors specifically within Integrated Science instruction in Egor Local Government Area, a gap that the present study intends to fill.

Summary of Literature Reviewed

The literature clearly indicates that classroom infrastructure, instructional materials, teacher attributes, and school climate significantly influence academic performance in Integrated Science. A learning environment that is physically conducive, resource-rich, and emotionally supportive enhances student learning and academic success. However, existing studies either examine these variables in isolation or focus on broader regions without attending to local realities. This study bridges that gap by investigating the combined impact of these environmental factors within the specific context of public secondary schools in Egor Local Government Area.

CHAPTER THREE

METHODOLOGY

This chapter presents the methodology adopted for the study. It begins with the

- Research design
- Population of the study
- Sample and sampling technique
- Research instrument
- Validity of the instrument
- Reliability of the instrument
- Method of Data collection
- Method of Data analysis

Research Design

This study adopted a descriptive survey research design, which is suitable for obtaining information about the current status of phenomena without manipulating variables. The design enabled the researcher to collect, analyze, and interpret data from a representative sample to determine the effect of the school environment on students' academic performance in Integrated Science across selected public secondary schools in Egor Local Government Area. The approach was deemed appropriate because it facilitated the exploration of relationships among variables in a natural setting.

Population of the Study

The population of this study comprised all Junior Secondary School (JSS) students offering Integrated Science in public secondary schools located within Egor Local Government Area of Edo State. Integrated Science teachers from these schools were also included. According to records from the Edo State Ministry of Education (2023), the population of students in the selected schools was 600.

Sample and Sampling Technique

A total sample size of 150 respondents was selected for the study. The sample size was initially calculated using Taro Yamane's formula, which yielded 120 students. To improve reliability and address potential non-responses, 30 additional students were included. The study utilized a purposive sampling technique to select seven public secondary schools that offer Integrated Science and reflect diverse environmental conditions. Within each selected school, proportionate stratified random sampling was employed to ensure adequate representation of JSS 2 students. In addition, two Integrated Science teachers were sampled from each school, resulting in 14 teachers overall.

Sample Distribution Table

Name of School	Location	Students Sampled	Teachers Sampled
Uselu Secondary School	Benin City	20	2
Evbuotubu Secondary School	Evbuotubu	20	2
Useh Secondary School	Useh	15	2
Egor Secondary School	Egor	20	2
Iyoba Girls' College	Uselu	20	2
Ogbe Secondary School	Ogbe	20	2
Adolor College	Ugbowo	35	2
Total	—	**150**	**14**

Author's compilation, 2025

Research Instrument

The main instrument used for data collection was a structured questionnaire titled "School Environment and Academic Performance in Integrated Science Questionnaire (SEAPISQ)." The questionnaire was divided into two sections:

- Section A gathered demographic information such as age, class, school, and gender.

- Section B contained items that assessed various components of the school environment (e.g., classroom infrastructure, instructional materials, teacher attributes, and school climate) and students' academic performance. All items in Section B were measured on a five-point Likert scale, ranging from *Strongly Agree (5)* to *Strongly Disagree (1)*.

Validity of the Instrument

To ensure content and face validity, the questionnaire was subjected to expert review. Specifically, two Lecturers in curriculum and instructional technology validated it. Their feedback was used to revise or eliminate ambiguous and irrelevant items, thereby enhancing the clarity and relevance of the instrument for the target respondents.

Reliability of the Instrument

The reliability of the instrument was tested through a pilot study involving 30 students from a public secondary school in Oredo Local Government Area, which shares similar characteristics with the study area. The internal consistency of the instrument was measured using Cronbach's Alpha, which yielded a reliability coefficient of 0.84, indicating a high level of reliability.

Method of Data Collection

Data were collected through the administration of the questionnaire by the researcher with assistance from two trained field assistants. The instruments were distributed during school hours to maximize participation. Clear instructions were provided, and clarifications were offered when necessary. All completed questionnaires were retrieved immediately to reduce the risk of data loss or incomplete responses.

Method of Data Analysis

Data obtained from the respondents were analyzed using both descriptive and inferential statistical techniques. Descriptive statistics such as frequency distributions, percentages, mean scores, and standard deviations were employed to summarize the demographic data and responses to survey items.

The analysis is organized in line with the research objectives and hypotheses stated in Chapter One. It begins with the presentation of respondents' demographic data, followed by a descriptive analysis of the key research variables, and concludes with the testing of hypotheses using appropriate statistical tools.

A total of 164 questionnaires were distributed to the respondents, comprising 150 Junior Secondary School students and 14 Integrated Science teachers drawn from seven public secondary schools in Egor Local Government Area. Out of this number, 151 questionnaires were properly completed and retrieved, representing a 92% response rate.

The responses provide insights into how different aspects of the school environment affect students' academic performance in Integrated Science.

The data collected were analyzed using descriptive and inferential statistics. Descriptive statistics such as frequency distributions, percentages, mean scores, and standard deviations were used to summarize demographic characteristics and responses on the school environment and students' academic performance. Inferential statistics, including correlation and regression analysis, were employed to test the hypotheses and determine the relationship between the independent variables (classroom infrastructure, instructional materials, teacher attributes, and school climate) and the dependent variable (students' academic performance in Integrated Science).

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

Data Presentation

The data collected was summarized and presented in the tables below. The analysis of demographic characteristics helped to provide insights into the research objectives.

Demographic Representation

Gender Distribution

Gender	Frequency	Percentage
Male	**78**	**51.7**
Female	**73**	**48.3**
Total	**151**	**100**

The Table shows the gender distribution of the respondents. Out of the 151 respondents, 78 (51.7%) were male while 73 (48.3%) were female. This indicates that both male and female students were almost equally represented in the study, with a slight dominance of

male respondents. The balanced gender participation enhances the reliability of the findings as both perspectives were adequately captured.

Age Distribution

Age Group	Frequency	Percentage
8 – 12 years	65	43.0
13 years & above	86	57.0
Total	151	100

The Table also presents the age distribution of the respondents. A total of 65 respondents (43.0%) were between the ages of 8–12 years, while 86 respondents (57.0%) were 13 years and above. This shows that the majority of the respondents were older students, suggesting that a larger proportion of participants were in the higher classes of Junior Secondary School. This distribution provides a broader view of how age differences may influence perceptions of the school environment and academic performance in Integrated Science.

Descriptive Statistics

Examining How Classroom Infrastructure Affects Academic Performance in Integrated Science

Research Question: How does classroom infrastructure affect students' academic performance in Integrated Science?

ITEM	N	Mean	Std. Deviation
The classroom where I learn Integrated Science is well-ventilated and comfortable.	151	3.96	1.08
The seating arrangement in my Integrated Science classroom allows me to focus and participate effectively.	151	3.99	1.02
The classroom is equipped with adequate lighting that facilitates learning.	151	4.00	1.01
The size of the classroom accommodates all students without overcrowding.	151	3.82	1.09

The physical condition of the classroom positively affects my concentration during Integrated Science lessons.	151	4.05	0.98

Source: Field Survey, 2025 (Average Mean Score = **3.96**)

The results presented in Table highlight students' perceptions of classroom infrastructure in relation to their academic performance in Integrated Science. The average mean score of 3.96 indicates a generally high agreement among respondents that classroom conditions play a vital role in their learning outcomes.

Specifically, 3.96 mean value shows that most respondents agreed their classrooms were well-ventilated and comfortable, while the mean of 3.99 suggests that the seating arrangement supported focus and participation. Adequate lighting was strongly affirmed as an important factor facilitating learning, and the classroom size was also seen as suitable for preventing overcrowding. Finally, the highest rated item emphasized that the overall physical condition of classrooms significantly enhanced students' concentration during Integrated Science lessons.

These findings suggest that conducive classroom infrastructure including ventilation, seating, lighting, and overall maintenance positively influences students' ability to learn effectively and perform well academically.

Descriptive Statistics

Examining the Availability and Utilization of Instructional Materials on Students' Learning Outcomes in Integrated Science

Research Question: How does the availability and utilization of instructional materials affect students' learning outcomes in Integrated Science?

ITEM	N	Mean	Std. Deviation
My Integrated Science teacher uses textbooks, charts, and diagrams during lessons.	151	4.08	0.94
Laboratory materials and equipment are available for practical Integrated Science experiments.	151	3.75	1.06
I have access to sufficient instructional materials to help me understand Integrated Science topics.	151	3.82	1.02
The use of instructional materials by my teacher makes learning Integrated Science easier and more interesting.	151	4.12	0.91

I actively use the instructional materials provided to improve my understanding of Integrated Science.	151	3.95	0.97

Source: Field Survey, 2025 (Average Mean Score = 3.94)

The findings in Table show that respondents generally agreed that the availability and utilization of instructional materials positively influenced their learning outcomes in Integrated Science. The overall average mean score of 3.94 indicates a high level of agreement.

Specifically, students confirmed that their teachers frequently used textbooks, charts, and diagrams during lessons while the highest mean score showed that the use of instructional materials made learning easier and more interesting. However, access to laboratory materials and equipment scored slightly lower compared to other items, suggesting that while practical facilities exist, they may not be sufficient in some schools.

These results demonstrate that instructional materials both visual aids and laboratory tools play a significant role in making Integrated Science lessons more engaging, understandable, and effective for students.

Descriptive Statistics

Examining the Impact of Teacher Qualifications and Attitudes on Students' Academic Performance in Integrated Science

Research Question: How do teacher qualifications and attitudes influence students' academic performance in Integrated Science?

ITEM	N	Mean	Std. Deviation
My Integrated Science teacher demonstrates in-depth knowledge of the subject.	151	4.20	0.88
The teacher explains concepts clearly and responds to students' questions effectively.	151	4.15	0.92
The teacher motivates and encourages students to perform well in Integrated Science.	151	4.05	0.95
The teacher is punctual and prepares well for Integrated	151	3.90	1.01

Science lessons.			
The teacher maintains a positive attitude towards all students, promoting a good learning environment.	151	4.18	0.89

Source: Field Survey, 2025 (Average Mean Score = 4.10)

The Table shows that respondents strongly agreed that their teachers' qualifications and attitudes had a significant influence on their academic performance in Integrated Science. The overall mean score of 4.10 indicates a consistently high level of agreement across all items.

Students reported that teachers demonstrated in-depth subject knowledge explained concepts clearly while addressing questions effectively and encouraged them to perform well, punctuality and lesson preparation scored slightly lower compared to other items, indicating some room for improvement. Importantly, maintaining a positive attitude and promoting a good learning environment ranked among the highest, reinforcing the role of teacher–student relationships in academic success. Overall, the results highlight that qualified and motivated teachers with strong subject knowledge and positive interpersonal skills significantly enhance students' learning experiences and outcomes in Integrated Science.

Descriptive Statistics

Relationship Between School Climate and Students' Academic Achievement in Integrated Science

Research Question: How does the school climate relate to students' academic achievement in Integrated Science?

ITEM	N	Mean	Std. Deviation
The school environment is safe and conducive to learning Integrated Science.	151	4.07	0.93
Students are encouraged to participate actively in classroom discussions and activities.	151	3.95	0.97
The school promotes good relationships between teachers and students.	151	4.12	0.89
School rules and discipline positively affect my learning	151	3.90	0.98

in Integrated Science.			
The overall school environment supports my academic progress in Integrated Science.	151	4.15	0.87

Source: Field Survey, 2025 (Average Mean Score = 4.04)

The Table reveals that students generally perceive their school climate as supportive of academic achievement in Integrated Science, with an overall average mean score of 4.04, categorized as "High."

The highest-rated item was the overall school environment supporting academic progress followed closely by the promotion of good teacher-student relationships. These findings underscore the importance of a positive and collaborative school culture in fostering student success.

Safety and conduciveness of the learning environment were also rated highly, indicating that students recognize the role of a secure atmosphere in promoting effective learning. Encouragement of active participation and adherence to school rules and discipline scored slightly lower but still within the "High" category, showing that structured engagement and discipline remain significant contributors to learning outcomes.

Overall, the findings highlight that a safe, inclusive, and well-managed school climate has a strong positive relationship with students' academic achievement in Integrated Science.

Discussion of Findings

Classroom Infrastructure and Students' Academic Performance

The findings revealed that classroom infrastructure plays a crucial role in shaping students' learning outcomes in Integrated Science. Respondents agreed that good ventilation, proper seating arrangements, adequate lighting, and sufficient classroom space positively influence their concentration and participation. The overall mean score reflects a high level of agreement that conducive classroom conditions enhance learning. This aligns with Owoeye and Yara (2019), who emphasized that the physical learning environment significantly affects students' attention span and overall achievement. It can therefore be concluded that poorly maintained classrooms may limit effective teaching and discourage active participation, thereby hindering performance in Integrated Science.

Availability and Utilization of Instructional Materials

The study further showed that instructional materials such as textbooks, charts, diagrams, and laboratory equipment are vital to improving students' understanding of Integrated Science. The highest mean score was recorded for the statement that instructional materials make learning more interesting and engaging. However, the availability of laboratory resources scored slightly lower, suggesting limitations in practical facilities. This finding supports Adeogun and Osifila (2020), who noted that instructional resources are indispensable in teaching science subjects, especially for translating theoretical

knowledge into practical experience. Thus, while students benefit from teachers' use of visual and textual materials, there is a need to strengthen the provision of laboratory facilities to further enhance hands-on learning.

Teacher Qualifications, Attitudes, and Students' Academic Performance

Another significant finding is that teacher qualifications and attitudes directly influence students' learning experiences. Students agreed that their Integrated Science teachers demonstrate mastery of the subject, explain concepts clearly, and encourage active participation. The highest mean score was recorded for teachers' positive attitudes toward students, which underscores the importance of teacher-student relationships in fostering academic success. This corroborates the work of Akiri and Ugborugbo (2018), who found that teacher competence, punctuality, and motivational strategies significantly improve students' performance. The implication is that beyond academic qualifications, teacher preparedness and interpersonal skills are vital for enhancing students' interest and performance in Integrated Science.

School Climate and Students' Academic Achievement

The results also indicate that school climate positively affects students' academic achievement. Respondents agreed that their schools provide a safe and conducive

learning environment, encourage participation, and promote healthy teacher-student relationships. The highest mean score was observed for the statement that the overall school environment supports academic progress. This finding agrees with Cohen et al. (2019), who argued that a positive school climate marked by safety, inclusiveness, and supportive relationships encourages better learning outcomes. Although school rules and discipline scored slightly lower, they were still considered supportive of academic achievement, confirming that discipline provides necessary structure for effective learning.

In general, the study demonstrates that multiple dimensions of the school environment collectively influence students' academic performance in Integrated Science. Classroom infrastructure provides the foundation for effective learning, instructional materials facilitate comprehension, teacher attributes motivate students, and a positive school climate fosters engagement and achievement. These findings are consistent with earlier studies and highlight the importance of a holistic approach to improving science education in Nigerian secondary schools.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Summary of Findings

This study investigated the effect of the school environment on students' academic performance in Integrated Science across selected public secondary schools in Egor Local Government Area of Edo State. A total of 164 questionnaires were distributed to students and Integrated Science teachers, out of which 151 were properly completed and retrieved, representing a 92% response rate. The findings are summarized below:

The study revealed that classroom infrastructure significantly contributes to students' academic performance in Integrated Science. Respondents agreed that proper ventilation, adequate lighting, spacious classrooms, and conducive seating arrangements positively influence their focus and learning outcomes. It also revealed that the availability and utilization of instructional materials were found to improve students' learning outcomes. Textbooks, charts, and diagrams were adequately used by teachers, and their impact on

learning was highly rated. However, the availability of laboratory equipment scored slightly lower, suggesting limitations in practical teaching resources.

Teachers' mastery of subject content, clarity in explaining concepts, motivation, punctuality, and positive attitudes toward students were reported to have a strong influence on students' learning experiences and academic success in Integrated Science.The findings showed that the overall school climate positively affects students' achievement. A safe and conducive learning environment, healthy teacher-student relationships, and encouragement of active participation were found to significantly support academic progress. Although discipline and school rules scored lower than other items, they were still recognized as important for maintaining effective learning. The study established that the school environment—in terms of infrastructure, instructional materials, teacher attributes, and school climate—collectively determines students' performance in Integrated Science.

Conclusion

The study concludes that a supportive school environment is fundamental to improving students' academic performance in Integrated Science. Well-structured classrooms enhance focus, instructional materials aid comprehension, qualified and motivated teachers inspire students, and a positive school climate provides the right conditions for learning. When these factors are adequately provided and maintained, students are more likely to perform better academically. Conversely, deficiencies in any of these aspects

may hinder effective learning and negatively impact performance. Therefore, improving the school environment should be prioritized as a critical strategy for enhancing science education in Nigerian secondary schools.

Recommendations

Based on the findings and conclusions of this study, the following recommendations are made:

1. **Improvement of Classroom Infrastructure:** Government and school administrators should invest in upgrading classrooms by ensuring proper ventilation, lighting, seating arrangements, and adequate space to create a conducive learning atmosphere.

2. **Provision of Instructional Materials:** Adequate and up-to-date instructional materials, especially laboratory equipment, should be provided to schools to strengthen practical aspects of Integrated Science learning.

3. **Provision of Instructional Materials:** Adequate and up-to-date instructional materials, especially laboratory equipment, should be provided to schools to strengthen practical aspects of Integrated Science learning.

4. **Capacity Building for Teachers:** Regular training and workshops should be organized for teachers to enhance their knowledge, teaching strategies, and motivational skills. Teachers should also be encouraged to adopt student-centered approaches that foster active participation.

5. **Policy and Stakeholder Support:** The Ministry of Education and other stakeholders should prioritize policies that focus on improving school environments. Adequate funding, monitoring, and evaluation systems should be established to ensure the sustainability of these improvements.

6. **Further Research:** Future studies could expand this research to include other subject areas or cover a larger population across multiple local government areas to provide broader insights into how the school environment affects students' academic performance in Nigerian secondary schools.

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APPENDIX 1
QUESTIONNAIRE
DEPARTMENT OF CURRICULUM AND INSTRUCTIONAL TECHNOLOGY,
FACULTY OF EDUCATION,
UNIVERSITY OF BENIN,
BENIN CITY.

Dear Participant,

My name is **Mercy Omeghe OKHINEMOYAH**, a student of the above department, conducting a study on factors affecting students' academic performance in Integrated Science. I hereby solicit your honest responses. All information provided will be treated with strict confidentiality. Your participation is voluntary.

Yours faithfully,

_____

MERCY OMEGHE OKHINEMOYAH

(Researcher)

Section A: Demographic Information

Gender: Male [ ] Female [ ]

Age: 8–12 years [ ] 13 years and above [ ]

Section B: Respondents' Responses

Instructions:

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

S/N	ITEMS	SA	A	U	D	SD
	Classroom Infrastructure and Its Effect on Academic Performance					
1	The classroom where I learn Integrated Science is well-ventilated and comfortable.					
2	The seating arrangement in my Integrated Science classroom allows me to focus and participate effectively.					
3	The classroom is equipped with adequate lighting that					

	facilitates learning.					
4	The size of the classroom accommodates all students without overcrowding.					
5	The physical condition of the classroom positively affects my concentration during Integrated Science lessons.					
	Availability and Utilization of Instructional Materials on Students' Learning Outcomes					
6	My Integrated Science teacher uses textbooks, charts, and diagrams during lessons.					
7	Laboratory materials and equipment are available for practical Integrated Science experiments.					
8	I have access to sufficient instructional materials to help me understand Integrated Science topics.					
9	The use of instructional materials by my teacher makes learning Integrated Science easier and more interesting.					
10	I actively use the instructional materials provided to					

	improve my understanding of Integrated Science.					
	Impact of Teacher Qualifications and Attitudes on Students' Academic Performance					
11	My Integrated Science teacher demonstrates in-depth knowledge of the subject.					
12	The teacher explains concepts clearly and responds to students' questions effectively.					
13	The teacher motivates and encourages students to perform well in Integrated Science.					
14	The teacher is punctual and prepares well for Integrated Science lessons.					
15	The teacher maintains a positive attitude towards all students, promoting a good learning environment.					
	Relationship Between School Climate and Students' Academic Achievement					
16	The school environment is safe and conducive to learning Integrated Science.					

17	Students are encouraged to participate actively in classroom discussions and activities.					
18	The school promotes good relationships between teachers and students.					
19	School rules and discipline positively affect my learning in Integrated Science.					
20	The overall school environment supports my academic progress in Integrated Science.					

APPENDIX 2
QUESTIONNAIRE
DEPARTMENT OF CURRICULUM AND INSTRUCTIONAL TECHNOLOGY,
FACULTY OF EDUCATION,
UNIVERSITY OF BENIN,
BENIN CITY.

Dear Respondent,

This questionnaire is designed to gather information from Integrated Science teachers on how the school environment affects students' academic performance in selected public secondary schools within Egor Local Government Area of Edo State. Your responses will be used strictly for academic purposes and treated with utmost confidentiality. Kindly respond to all items sincerely and objectively.

Thank you for your time and cooperation.

Section A: Demographic Information

Please tick (✓) the option that best represents your response.

1. **Gender:** Male ☐ Female ☐
2. **Age:** 21–30 ☐ 31–40 ☐ 41–50 ☐ 51 and above ☐
3. **Highest Educational Qualification:** NCE ☐ B.Sc./B.Ed ☐ M.Ed ☐ Others (specify) _____
4. **Years of Teaching Experience:** 1–5 years ☐ 6–10 years ☐ 11–15 years ☐ 16 years and above ☐
5. **Name of School:** _____

Section B: Effect of School Environment on Students' Academic Performance

Please indicate the extent to which you agree or disagree with the following statements by ticking (✓) the appropriate column.

Scale: SA = Strongly Agree A = Agree U = Undecided D = Disagree SD = Strongly Disagree

S/N	Statements	SA (5)	A (4)	U (3)	D (2)	SD (1)
A. Classroom Environment						
1	My school provides well-ventilated classrooms conducive for teaching Integrated Science.	☐	☐	☐	☐	☐
2	Classrooms are adequately spacious for effective teaching and learning.	☐	☐	☐	☐	☐
3	Classroom seating arrangement enhances student participation and concentration.	☐	☐	☐	☐	☐
4	Poor classroom conditions hinder effective teaching of Integrated Science.	☐	☐	☐	☐	☐
B. Instructional Materials						
5	There are sufficient teaching aids for Integrated Science lessons.	☐	☐	☐	☐	☐
6	Laboratory materials and equipment are regularly maintained and functional.	☐	☐	☐	☐	☐

7	The availability of teaching aids improves students' understanding of Integrated Science.	☐	☐	☐	☐	☐
8	Lack of instructional materials negatively affects students' academic performance.	☐	☐	☐	☐	☐
C. Teacher Attributes and Instructional Practices						
9	I regularly use innovative teaching methods in Integrated Science.	☐	☐	☐	☐	☐
10	Teachers' punctuality and commitment influence students' performance.	☐	☐	☐	☐	☐
11	Teachers' mastery of subject matter enhances students' academic achievement.	☐	☐	☐	☐	☐
12	Regular feedback from teachers improves students' learning outcomes.	☐	☐	☐	☐	☐
D. School Climate and Administration						
13	The school administration supports teachers with necessary resources.	☐	☐	☐	☐	☐
14	There is effective communication between teachers and management.	☐	☐	☐	☐	☐
15	The general discipline in the school promotes academic excellence.	☐	☐	☐	☐	☐
16	Teachers are adequately motivated to improve	☐	☐	☐	☐	☐

	students' academic outcomes.					
E. Students' Academic Performance						
17	The school environment contributes significantly to students' academic success.	☐	☐	☐	☐	☐
18	Students' academic performance in Integrated Science has improved over the years.	☐	☐	☐	☐	☐
19	Inadequate facilities reduce students' interest in Integrated Science.	☐	☐	☐	☐	☐
20	A well-organized school environment encourages students to study harder.	☐	☐	☐	☐	☐

Closing Remark

Thank you for participating in this study. Your cooperation and truthful responses are highly appreciated. All information will remain confidential and used solely for academic purposes.