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Research paper

Assessment of Socio-Educational Determinants of Poor Senior Secondary Certificate Examination (SSCE) Performance in Selected Secondary Schools in Funtua LGA, Nigeria

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Abstract

The Senior Secondary School Certificate Examination (SSCE) remains a critical indicator of students' academic attainment and access to higher education in Nigeria. Despite its importance, students in Funtua, Katsina State, continue to exhibit persistently low achievement in science subjects. This study investigated the determinants of this trend using a descriptive survey design involving 500 students, 15 science teachers, and 5 principals across five secondary schools. Data were obtained through structured questionnaires, interviews, and observation checklists. Findings reveal that poor performance arises from systemic resource disparities, including inadequate laboratory infrastructure, insufficient instructional materials, and overcrowded classrooms. Pedagogical limitations, teacher competency gaps, and sociocultural factors—such as low parental involvement, limited student motivation, and examination malpractice—further constrain science learning outcomes. These interrelated challenges underscore deep-rooted structural inequalities within Funtua's educational environment.

Keywords: *SSCE; Secondary School Students; Science Subjects; Funtua; Academic Performance; Practical Equipment; Socioeconomic Factors.*

1. Introduction

The Senior School Certificate Examination (SSCE) is a pivotal milestone in Nigeria's educational system, serving as a gateway to tertiary education and future career opportunities. Success in the examination, particularly in science subjects such as Physics, Chemistry, Biology, and Agricultural Science, is crucial for entry into science, technology, engineering, and mathematics (STEM)-related fields, which are central to national development[1]. In Funtua, however, persistent poor performance in these subjects has raised serious concerns among educators, policymakers, and parents. Understanding the reasons behind this underachievement is crucial, given the critical role of science education in preparing students to contribute to technological innovation, healthcare, agriculture, and industrial growth [2].

This concern is not unique to Funtua; it mirrors broader challenges confronting the Nigerian education sector. Over the years, stakeholders have observed gaps in the teaching and learning of science that hinder students' performance at the secondary level and, by extension, their readiness for higher education [3]. These challenges have attracted national and international attention because of their implications for sustainable development and human capital formation[4].

Globally, the importance of strengthening science education cannot be overstated. International benchmarks emphasize inquiry-based learning, hands-on laboratory experiences, and continuous teacher development as key drivers of student achievement in STEM disciplines [5]. Countries that have made deliberate investments in these areas report improved student outcomes and increased participation in STEM-related careers, which are vital for competitiveness in the global knowledge economy [6]. Against this backdrop, the present study seeks to examine the immediate factors influencing poor performance in science subjects among secondary school students in Funtua and to recommend practical solutions to address the problem. Given the centrality of science education to both individual advancement and national development, the study's findings have significance beyond Funtua, with implications for the Nigerian education system more broadly.

1.1. Literature review

Importance of Science Education and Performance

Science education equips students with the knowledge and skills necessary for STEM-related fields, essential for national development and innovation. The SSCE serves as a critical assessment of students' mastery in science subjects, determining access to higher education and professional opportunities [7]. Persistent poor performance in these subjects in Nigerian secondary schools has been linked to systemic and contextual challenges that impede effective learning [8].

Availability and Adequacy of Instructional Resources
The adequacy of textbooks, laboratory equipment, and teaching aids is a major determinant of science achievement. Laboratory-based learning, practical activities, and the availability of instructional materials reinforce theoretical knowledge and develop practical skills. Insufficient laboratory facilities and a low frequency of practical activities negatively affect students' achievement and interest in science subjects[9].
Teacher Quality and Curriculum Implementation
Teacher effectiveness and curriculum fidelity are vital for students' mastery of science subjects. Limited laboratory resources and poor accessibility significantly correlate with lower achievement in science subjects such as chemistry [10].
The ability of teachers to deliver content effectively depends on subject-matter expertise, pedagogical competence, and adherence to the curriculum. Weak implementation of the secondary school science curriculum contributes to poor SSCE performance[11]. Teachers' inability to engage students in practical science lessons adversely affects attitudes and learning outcomes [12]. Blended learning approaches have shown benefits in improving engagement and comprehension in science instruction, indicating the importance of adopting modern pedagogical strategies [13].
Socioeconomic and Structural Factors
Socioeconomic and structural challenges—including school location, class overcrowding, and parental support—influence science performance. Rural schools often face greater disadvantages due to under-resourcing, underqualified teachers, and limited community support[14]. Students in rural areas are particularly affected by poor school infrastructure and inadequate teaching personnel. Active parental involvement positively influences students' academic achievement in science, highlighting the role of external support in educational success [15].
Examination Behaviour and Academic Integrity
Examination behaviour and malpractice significantly impact the credibility of assessment outcomes. Dependence on external assistance and cheating can produce inflated grades that do not reflect genuine competence [16]. Reliance on malpractice undermines problem-solving skills and self-confidence. Factors contributing to examination malpractice continue to pose challenges to maintaining educational standards in Nigeria [17].
Laboratory Management and Safety
The management and utilization of laboratory resources are essential for effective science learning. Proper safety protocols and organized use of laboratory facilities enhance student comprehension and practical skill acquisition. Effective laboratory management contributes to better performance in Biology and other practical-intensive subjects [18].
Theoretical Framework: Bourdieu's Theory of Cultural and Social Reproduction
This study is guided by Pierre Bourdieu's Theory of Cultural and Social Reproduction, which provides a sociological explanation for educational inequalities and persistent performance gaps among students. Academic success is influenced not only by individual ability but also by the forms of capital—economic, cultural, and social—that students possess. These forms of capital determine access to educational opportunities, learning resources, and institutional support, reproducing social hierarchies [19].
In science education, cultural capital helps explain disparities in achievement between students from different socioeconomic backgrounds. Students whose parents possess higher educational qualifications or familiarity with scientific discourse are more likely to have supportive learning environments and exposure to scientific ideas at home [20]. Conversely, students from lower socioeconomic backgrounds may lack such exposure, limiting engagement and confidence in science subjects [21].
Social capital, referring to networks of relationships and community support, plays a crucial role in science education. Schools with strong community ties, adequate funding, and active parental involvement foster better science performance [22]. Conversely, where schools are under-resourced and community engagement is weak, deficits in social capital contribute to persistent underachievement [23].
Bourdieu's notion of habitus—the internalized dispositions shaped by one's social background—explains how students' attitudes toward science are conditioned by prior experiences and social environments. Students from families or peer groups that value science and education develop positive attitudes and higher aspirations toward STEM careers. Conversely, students who perceive science as difficult or irrelevant may disengage, leading to poor performance and limited participation in science-related fields [24].
From this theoretical perspective, poor performance in science subjects among secondary school students in Funtua is a manifestation of broader structural inequalities. Limited access to instructional resources, low parental involvement, inadequate teacher quality, and weak laboratory facilities interact with socioeconomic disadvantage to reproduce educational inequality [25]. Improving science performance requires pedagogical interventions as well as social reforms that enhance students' cultural and social capital..

2. Methodology

A descriptive survey design was employed to examine the experiences and perceptions of students, teachers, and principals in five schools. A purposive and stratified sampling approach was used to select participants: 500 students were proportionally sampled across grades, 15 teachers were purposively chosen based on experience, and all 5 school principals were included.
Data were collected using questionnaires, interviews, and observation checklists. Questionnaires captured quantitative and qualitative responses from students and teachers, semi-structured interviews provided in-depth insights from principals and selected teachers, and observation checklists recorded classroom practices and student engagement.
Validity was ensured through expert review, pilot testing in a non-participating school, and triangulation of data sources. Reliability was achieved by checking the internal consistency of questionnaire items, standardizing data collection procedures, and establishing inter-rater agreement for observational data.
Data analysis involved descriptive statistics (means and percentages) for quantitative data and thematic analysis for qualitative data, offering a comprehensive overview of the study findings [26].

2.1. Description of the study area

Funtua Local Government Area (LGA) is one of the earliest LGAs established in Nigeria, created as part of the 1976 nationwide local government reform. It serves as the administrative headquarters of the Katsina South Senatorial District, which comprises eleven LGAs: Funtua, Bakori, Dandume, Faskari, Sabuwa, Kankara, Danja, Malumfashi, Kafur, Musawa, and Matazu. The LGA covers an estimated land area of 448 km². According to the 2006 National Population Commission (NPC) census, the area had a population of approximately 570,000, with a slight projected increase to 570,110 by 2016.

Geographically, Funtua is located at latitude 11°32′N and longitude 7°19′E (Figure 1). It shares boundaries with Giwa LGA in Kaduna State to the south, Bakori to the east, Danja to the southwest, Faskari to the northwest, and Dandume to the west [27].

Funtua is recognized for its rich human capital and is home to numerous prominent individuals across various professional fields[28]. The area also boasts a vibrant educational landscape, hosting a variety of tertiary institutions such as Bala Abdullahi College of Administration, Abdullahi Aminchi College of Advanced Studies (affiliated with Ahmadu Bello University, Zaria), the School of Basic and Remedial Studies, the National Teachers' Institute Study Centre, several study centres of the Federal University Dutsin-Ma, and the recently established Federal University of Health Sciences, Funtua.

In addition to its higher education institutions, Funtua is well-served by a substantial number of secondary schools, both public and private, contributing significantly to the educational development of the region.

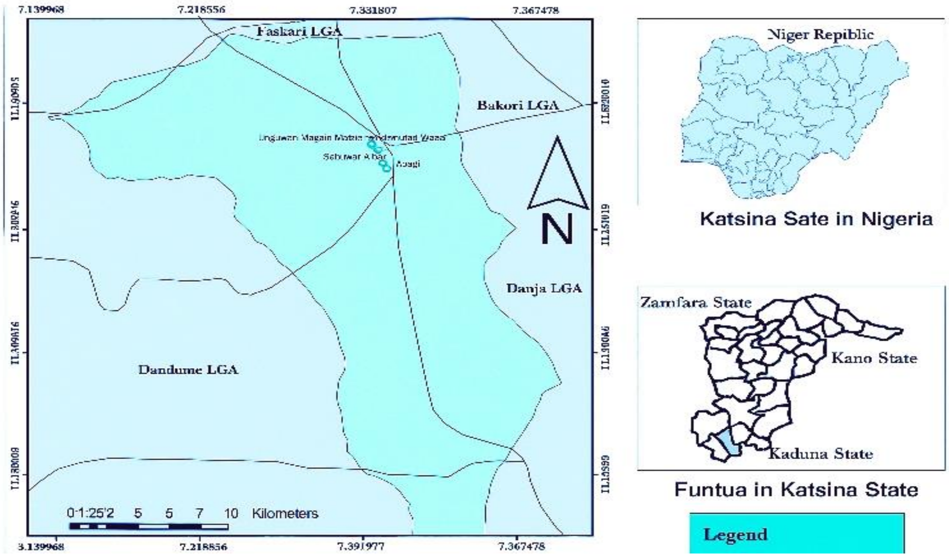

Fig. 1: Map of. Funtua Local Government Area.

3. Results and Discussion

Table 1: Availability of Practical Equipment (%)

Subject	School 1	School 2	School 3	School 4	School 5	Mean (%)
Physics Lab	40	70	30	80	50	54
Chemistry Lab	50	60	40	75	45	54
Biology Lab	60	50	35	70	55	54
Agricultural Science Tools	30	40	25	60	35	38

The assessment of practical science equipment across five secondary schools in Funtua reveals significant systemic inequalities in resource provision, with important implications for science education quality and student outcomes. Across Physics, Chemistry, and Biology, the average laboratory availability was moderate at 54 %, indicating that approximately half of the required equipment was accessible (Table 1). Agricultural Science was particularly under-resourced, with only 38 % of tools available on average. School 4 consistently demonstrated higher resource availability (70–80 %), whereas School 3 had the lowest provision (30–40 %), highlighting stark disparities that extend across subjects. These uneven distributions reflect entrenched systemic inequalities in the allocation of educational resources. Schools situated in more affluent or urban areas typically benefit from better infrastructure, government support, and community engagement, while those in economically disadvantaged or rural regions face chronic under-funding and limited institutional backing [29].

Structural and institutional factors further compound these disparities. Resource allocation processes are often opaque, poorly targeted, and subject to weak oversight or political favouritism, resulting in inequitable provisioning across schools. This is especially evident in the undervaluation of vocational and practical subjects—a pattern seen in the shortfall of Agricultural Science equipment [30]. Consequently, students in under-resourced schools are systematically deprived of opportunities to develop critical, practical, and problem-solving skills, reinforcing both social and educational inequities. The pronounced shortfall in Agricultural Science equipment illustrates an institutional bias against vocational and practical subjects, which are frequently undervalued despite their relevance to local livelihoods [31].

Pedagogical and teacher-related challenges intersect with resource inadequacies, further limiting the effectiveness of science education. Even where laboratories exist, a shortage of qualified and motivated teachers can reduce practical engagement and learning outcomes. For example, in Physics, the availability of laboratory resources correlates strongly with students' achievement and interest [32]. Schools with well-equipped Physics and Chemistry laboratories, such as School 4, are better able to support hands-on learning, fostering comprehension of abstract concepts, critical thinking, and innovation. Conversely, poorly resourced schools like School 3 struggle to attract and retain competent science teachers, perpetuating limited practical instruction, lower student engagement, and suboptimal academic performance. This challenge is especially pronounced in Agricultural Science, where insufficient practical tools impede the development of psychomotor skills and undermine vocational objectives [33].

Student-level and sociocultural factors further shape the impact of available resources. Learners from communities with lower educational attainment often have limited exposure to scientific practices outside school and reduced capacity to supplement classroom learning, exacerbating the effects of inadequate school resources. Parental engagement and advocacy, typically influenced by socioeconomic status, play a crucial role in shaping school support and resourcing [29].

The patterns observed in Funtua reflect broader national and international trends. Research in Nigeria and other countries documents widespread inadequacy of laboratory facilities—for example, only 20 % of junior secondary schools in one study had basic science lab equipment [30]. Additional studies highlight similar challenges: insufficient resources and support for practical learning [31]. Limited teacher capacity [17] and sociocultural disparities affecting student outcomes. The effective implementation of science education faces major barriers, including infrastructural deficits, inadequate funding, and a shortage of qualified teachers [34]. These findings underscore that systemic resource inequities, teacher quality constraints, and sociocultural factors jointly limit the effectiveness of science education, particularly in underprivileged or rural contexts.

Table 2: Access to Reading Materials(%)

Material Type	School 1	School 2	School 3	School 4	School 5	Mean (%)
Adequate Textbooks	40	55	35	65	45	48
Reference Materials	20	30	15	40	25	26
Students Without Access	40	15	50	10	30	29

The analysis of students' access to reading materials across the five schools in Funtua (Table 2) highlights significant inadequacies and disparities that reflect broader structural inequities within the Nigerian education system. Access to core textbooks ranged from 35% in School 3 to 65% in School 4, with an overall mean of 48%, indicating that fewer than half of students have adequate access to essential learning resources. Reference materials were even more limited, averaging only 26%, with School 3 being the least resourced (15%) and School 4 comparatively better (40%). Alarmingly, 29% of students reported having no access to any reading materials, with School 3 recording the highest deprivation at 50% (Table 2).

Collectively, these findings highlight both intra-school disparities and a general shortfall in resource provision, which limit students' opportunities for independent study, critical thinking, and effective examination preparation [35]. These disparities reflect systemic inequalities rooted in socioeconomic, structural, and institutional factors. Schools located in economically disadvantaged areas, such as School 3, experience chronic underfunding, limited infrastructure, and weak community support, resulting in poorly stocked libraries and insufficient textbooks and reference materials [36]. Government funding mechanisms, often inconsistent and inadequately monitored, exacerbate these inequities, while better-resourced schools, such as School 4, benefit from more effective leadership, community advocacy, or targeted interventions [37]. Overcrowded classrooms further strain limited resources, creating high student-to-book ratios that reduce access and usability [32].

Sociocultural and student-level factors further compound these disparities. Students from low-income households often cannot afford personal copies of textbooks and must rely entirely on school-provided materials. Limited parental educational and social capital reduces the capacity for advocacy, leaving disadvantaged schools with minimal pressure to improve resource provision [19]. These dynamics create a reinforcing cycle of inequity, where students' learning opportunities are constrained by both material shortages and broader social disadvantages.

Access to reading materials plays a critical role in educational achievement. Adequate textbooks, laboratory resources, and ICT facilities enhance comprehension, engagement, and skill acquisition among students. Studies have shown that learners with sufficient access to reading resources—such as textbooks, storybooks, and digital tools—demonstrate higher levels of reading fluency, comprehension, and vocabulary development [38]. In Nigeria, students who are provided with sufficient instructional materials perform significantly better in examinations than those in under-resourced schools [39].

Likewise, library resource accessibility and utilization positively influence teaching effectiveness and student learning outcomes [40]. The current findings, showing that fewer than half of students have access to core textbooks and that reference materials are extremely limited, suggest a likely negative impact on reading culture, independent study habits, and academic performance.

Evidence from science education reinforces this pattern. Studies in Nigeria show that limited access to laboratory equipment and science textbooks in subjects such as Physics, Chemistry, and Biology significantly contributes to low SSCE outcomes, especially in rural areas.[41] reported that students with adequate instructional materials achieved markedly higher results than peers in under-resourced schools. Similarly, [42] observed that while most science textbooks meet curriculum standards, poor readability and limited coverage hinder students' comprehension and performance.

Table 3: Students' Reliance on Assistance During Exams(%)

Type	School 1	School 2	School 3	School 4	School 5	Mean (%)
Students Relying on Assistance	50	35	60	25	45	43
Students Studying Independently	50	65	40	75	55	57

The analysis of examination behaviour across the five schools in Funtua (Table 3) reveals significant disparities in student reliance on external assistance and independent learning. School 3 recorded the highest proportion of students depending on assistance (60%), indicating weak preparation and an elevated risk of academic malpractice. By contrast, School 4 exhibited the lowest reliance on assistance (25%) and the highest proportion of independent learners (75%), reflecting stronger academic confidence, integrity, and effective preparation. On average, 43% of students reported dependence on external support, while 57% studied independently. Although slightly more students demonstrated academic independence, the narrow margin underscores the pervasive nature of malpractice in the study context (Table 3). Reliance on assistance not only inflates grades without corresponding competence but also undermines the credibility of assessments and reduces preparedness for higher education and future careers.

The observed variation in examination behaviour can be attributed to multiple interrelated factors. Schools with higher dependence on assistance, such as School 3, likely face structural and institutional challenges, including inadequate teaching quality, limited instructional resources, weak academic leadership, and insufficient student support systems. These deficiencies hinder effective learning and create conditions conducive to malpractice. Conversely, schools like School 4, with lower reliance on assistance, likely benefit from better teaching quality, stricter examination monitoring, a culture of academic integrity, and motivated, well-supported students. Socioeconomic disparities, peer influence, unequal curriculum coverage, and varying preparation times further contribute to these patterns, highlighting systemic and contextual factors that affect both student learning and assessment outcomes.

These findings are consistent with previous research. Dependence on external help during examinations has been shown to weaken students' knowledge, problem-solving skills, and self-confidence [43] while examination malpractice undermines the credibility of academic certificates and negatively impacts higher education and professional performance [44]. At a societal level, such practices reduce workforce quality and hinder national development [4].

Empirical evidence corroborates these patterns. [45] reported that Miracle Examination Centres (MECs) in Nigeria organise large-scale cheating for profit, producing graduates with weak competence and eroding teacher motivation and community trust. Similarly, [46] documented the role of digital devices, collusion, and weak invigilation in facilitating modern cheating, reinforcing the concern that reliance on external assistance inflates results without fostering genuine competence. Internationally, systematic reviews and empirical studies confirm the persistence of malpractice. [47] highlighted the rise of contract cheating via essay mills and paid academic services, warning that such practices compromise the credibility of higher education qualifications. [48] found that poor preparation, systemic pressure to achieve, and insufficient academic support are major contributors to student cheating, and emphasized that strengthening academic integrity requires enhanced learning support, better preparatory resources, and clear institutional guidance.

Technological changes have introduced additional dimensions to examination behaviour. [49] observed that high school students increasingly rely on generative AI tools, such as ChatGPT, for assignments and assessments, often without perceiving this as cheating. While convenient, such reliance reduces study effort and independent thinking, echoing concerns that inflated results do not correspond to genuine competence. Similarly, [50] in a randomized field experiment, found that students under unproctored conditions scored approximately 0.2–0.3 standard deviations higher than their peers under proctored exams, yet these elevated scores did not reflect actual learning. These findings underscore that dependence on external assistance—whether human, technological, or systemic—creates misleading performance indicators and reinforces inequities in student outcomes (Table 3).

Table 4: Distribution of Other Education Problems by School (%)

Problem	Sch. 1	Sch. 2	Sch. 3	Sch. 4	Sch. 5	Mean (%)
Inadequate Qualified Teachers 45	50	60	40	55	50	
Weak Foundation	55	60	65	50	58	58
Overcrowded Classrooms	50	48	52	47	55	50
Poor Motivation/Attitude	40	42	45	38	41	41

The findings in Table 4 highlight persistent structural and pedagogical challenges that adversely affect students' performance in science subjects across the five schools in Funtua. The most prevalent issue is a weak educational foundation (mean = 58%), reported by the majority of respondents across all schools, with School 3 most affected (65%) and School 4 least affected (50%). This pattern points to systemic deficiencies originating from early education, which impede students' ability to engage meaningfully with complex scientific concepts at the secondary level. Weak foundational knowledge often results in poor comprehension, reduced confidence, increased dropout tendencies, and forces teachers to devote significant instructional time to remedial teaching, slowing overall curriculum progress. Over time, such deficiencies produce a less skilled workforce and constrain national development [51].

The prevalence of a weak educational foundation among students, particularly in School 3, stems from systemic shortcomings in primary education, including under-resourced schools, inadequately trained teachers, poor infrastructure, and overcrowding, which collectively hinder the development of literacy, numeracy, and scientific skills [52]. Socioeconomic challenges, such as limited parental support, inadequate nutrition, and restricted access to educational materials, further diminish student readiness. Language barriers compound these difficulties, as students often receive instruction in English as a second language, limiting comprehension of complex scientific content [53]. These conditions reflect broader educational inequalities and social stratification, whereby students from marginalized backgrounds face systemic disadvantages that constrain academic achievement and future opportunities [54].

Inadequately qualified teachers emerged as another critical factor (mean = 50%), with School 3 again recording the highest incidence (60%). Teacher quality is strongly correlated with student performance, as insufficient subject-matter knowledge and weak pedagogical competence hinder effective science instruction [45]. Similarly, lack of qualified science teachers has been identified as a major cause of mass failure in Nigerian secondary schools, while studies in Plateau State report that teacher competence, access to training, and instructional resources significantly affect learning outcomes [55]. The high incidence of unqualified teachers in School 3 reflects systemic challenges in teacher recruitment, training, and deployment, exacerbated by nationwide shortages of qualified science educators, limited professional development opportunities, poor working conditions, and weak supervision [56].

Overcrowded classrooms were reported by about half of students overall (mean = 50%) and were consistently observed across schools. Congested learning environments limit teacher–student interaction, reduce opportunities for individualized instruction, and compromise classroom management. Overcrowding arises from rapid enrolment growth, insufficient infrastructure, and teacher shortages, collectively undermining learning outcomes and academic integrity. Similar findings across Africa highlight the adverse impact of large class sizes on students' cognitive, affective, and psychomotor development [57]. In Nigeria, overcrowded classrooms negatively affect academic performance [58] while in Kenya, insufficient teaching and learning resources, compounded by large class sizes, contributed to poor student outcomes in science subjects like Biology [59].

Poor student motivation and negative attitudes, though less prevalent (mean = 41%), remain important contributors to underperformance, with School 3 recording the highest incidence (45%). These factors often overlap with weak foundational knowledge and teacher inadequacy, reducing learner engagement and interest in science subjects. International studies echo these findings: in Malaysia, a weak grasp of basic concepts discouraged students from pursuing science [60], and in Ghana, uninspiring teaching methods and limited student engagement diminished motivation [56]. Both student disposition and teacher influence are therefore critical in sustaining interest and achievement in science subjects.

Comparative global experiences reinforce the systemic nature of these challenges. In India, weak foundational knowledge and reliance on rote learning hinder the development of critical thinking and problem-solving skills in Physics [61]. Conversely, countries with strong education systems, such as Finland and South Korea, have overcome similar challenges through sustained investment in teacher quality, early childhood education, and learner-centered pedagogies [62]. This contrast underscores the need for Nigeria to prioritize interventions addressing teacher competence, class size reduction, and foundational learning to bridge performance gaps in science education.

4. Conclusion

The persistent poor performance of students in SSCE science subjects in Funtua stems from multiple interrelated factors. Chief among these are inadequately qualified teachers (50%), inadequate provision of practical resources, insufficient access to learning materials, evidenced by low availability of textbooks (48%) and reference materials (26%), and a high rate of reliance on assistance during examinations (43%). Collectively, these deficiencies hinder students' conceptual understanding, limit opportunities for independent learning, and weaken overall science performance.

4.1. Limitations

This study, while insightful, is not without limitations.

1) Sample and geographical scope: The findings are limited to schools within Funtua, which may not fully represent the broader regional or national context.
2) Self-reported data: A portion of the data relied on students' and teachers' self-reports, which may be subject to bias or inaccuracies.
3) Resource constraints: Limited time and available school records restricted the depth of analysis, particularly regarding longitudinal performance trends.
4) Focus on selected variables: The study concentrated mainly on teacher qualification, resource availability, and examination practices; other possible influences—such as parental factors, socio-economic status, or school management practices—were not extensively examined.

4.2. Future scope

Further research can expand upon these findings by:
1) Broadening the study area: Including additional local government areas or states to enable comparative analysis and improve generalizability.
2) Conducting longitudinal studies: Tracking students' performance over several years to better understand long-term trends and the impact of interventions.
3) Exploring additional factors: Examining socio-economic influences, parental involvement, teacher motivation, administrative practices, and peer-related variables.
4) Evaluating interventions: Assessing the effectiveness of targeted improvements—such as teacher training programs, enhanced laboratory facilities, and increased textbook provision—through experimental or quasi-experimental research designs.
5) Integrating qualitative insights: Using interviews or focus groups to gain a deeper understanding of students' and teachers' experiences with science learning.

4.3. Recommendations

1) Science laboratories and agricultural tools should be adequately equipped and maintained to enhance students' practical skills and experiential learning.
2) Sufficient provision of textbooks and reference materials should be ensured across schools to promote equitable access to essential learning resources.
3) Students should be encouraged to cultivate independent study habits, while efforts should be intensified to minimize reliance on external assistance during examinations.
4) Teachers should undergo continuous professional development, with particular emphasis on active and practical teaching methodologies to strengthen classroom delivery.
5) In addition, structured extra lessons, such as refresher courses, should be replicated in Funtua to support learning, address gaps in foundational knowledge, and better prepare students for science examinations.

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