ASSESSMENT OF CHALLENGES AFFECTING TEACHING AND LEARNING OF BIOLOGY IN SECONDARY SCHOOLS IN BIU, BORNO STATE, NIGERIA

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This study examines the challenges affecting the teaching and learning of Biology in secondary schools in Biu, Borno State, Nigeria. Employing a cross-sectional survey design, data were collected from 150 students and 25 teachers across five schools using structured questionnaires. Analysis with SPSS and MS Office Excel revealed that teacher competence, resource availability, learning environment, and teaching methods significantly impact Biology education. Teachers demonstrated strong subject knowledge but faced challenges in accessibility and feedback provision. Inadequate resources, such as laboratory equipment and textbooks, hindered effective learning, while environmental factors like noise and insufficient laboratory facilities further reduced teaching efficacy. Interactive, student-centred teaching methods proved effective, though reliance on traditional approaches limited critical thinking and practical application. The study concludes that addressing these challenges through improved teacher training, resource provision, enhanced infrastructure, and innovative teaching strategies is essential for fostering better learning outcomes in Biology education.

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Introduction

Biology, as a foundational science subject, plays a vital role in secondary education, equipping students with essential knowledge and skills necessary for addressing real-world challenges in health, agriculture, and environmental sustainability. Despite its significance, the teaching and learning of biology in secondary schools often face numerous challenges, particularly in regions such as Biu, Borno State, Nigeria. These challenges hinder students' academic performance and reduce their interest in science-related careers, ultimately affecting the development of human capital in science and technology.

One critical factor influencing the effectiveness of biology education is teacher competence. The knowledge, skills, and instructional strategies employed by teachers significantly impact students' understanding and engagement. Inadequate training, lack of professional development opportunities, and insufficient mastery of the subject matter often lead to suboptimal learning outcomes. This study seeks to identify the effect of teacher competence on the effectiveness of learning biology in secondary schools in Biu.

Another major issue is the lack of teaching resources. The availability of instructional materials such as textbooks, laboratory equipment, and visual aids is crucial for facilitating interactive and practical learning experiences. In many secondary schools in Biu, these resources are either unavailable or insufficient, forcing teachers to rely on theoretical instruction. This study will explore

the effect of resource scarcity on the effective teaching and learning of biology.

The teaching and learning environment also plays a significant role in determining the success of educational activities. Factors such as class size, school infrastructure, and the availability of functional laboratories contribute to creating a conducive environment for learning. In Biu, schools often face overcrowded classrooms, poorly maintained facilities, and inadequate support systems, all of which can undermine the teaching and learning process. This research aims to examine whether the current teaching and learning environment is conducive to biology education.

Finally, the methods used in teaching biology have a profound impact on students' comprehension and retention of knowledge. Innovative, student-centred approaches such as inquiry-based learning and hands-on experiments are known to enhance engagement and academic achievement. However, traditional lecture-based methods remain prevalent in many schools, potentially limiting students' ability to fully grasp biological concepts. This study will evaluate whether the teaching methods used affect the teaching and learning of biology in secondary schools in Biu.

Statement of the problems

The poor performance of secondary school students in biology is largely due to the lack of qualified teachers and ineffective teaching methods. Many schools employ under-qualified educators who lack the expertise to deliver biology lessons effectively. Additionally, some teachers rely on outdated methods, such as reading notes without engaging students, which reduces interest and comprehension. Corruption in teacher recruitment further worsens the situation, as unqualified individuals secure teaching positions, compromising the quality of education.

Institutional deficiencies also contribute significantly to this issue. Many schools lack essential resources, including laboratory equipment, teaching aids, and updated textbooks, making it difficult for students to grasp practical concepts. Poorly maintained infrastructure and overcrowded classrooms further hinder effective teaching and learning. The absence of well-planned biology-related activities, such as field trips and science fairs, deprives students of opportunities to apply their knowledge in real-world settings.

Students' attitudes and behaviours are another critical factor affecting biology performance. Many students show a lack of interest in the subject, viewing it as difficult or irrelevant to their future aspirations. This often leads to poor study habits, disengagement, and indiscipline, including truancy and disruptive behaviour. Such attitudes prevent students from fully benefiting from biology lessons, especially when they miss practical sessions or fail to complete assignments.

The interplay of these challenges issues, institutional shortcomings, and student attitudes has led to persistently poor outcomes in biology. High failure rates in national examinations highlight the need for urgent interventions, including improved teacher training, provision of resources, and efforts to foster student interest and discipline. Addressing these challenges holistically is essential for improving biology education in secondary schools.

Ob**jectives**

This research aims to establish factors that affect the effective teaching and learning of Biology in secondary schools in Borno State.

1. To identify the effect of teacher's competence on the effectiveness of learning of Biology in secondary schools.

2. To find the effect of lack of teaching resources on effective teaching and learning of Biology in secondary schools.

3. To examine whether the teaching and learning environment is conducive to the teaching and learning of Biology in secondary schools.

4. To evaluate whether the teaching method used has an effect on teaching and learning of Biology in secondary schools.

Research Question

1. What is the effect of teacher competence on the effectiveness of learning Biology in secondary schools in Borno State?

2. How does the lack of teaching resources impact the effective teaching and learning of Biology in secondary schools in Borno State?

3. Is the teaching and learning environment conducive for the teaching and learning of Biology in secondary schools in Borno State?

4. How does the teaching method used affect the teaching and learning of Biology in secondary schools in Borno State?

Literature review

Biology education in secondary schools plays a crucial role in students' academic and career development. It fosters interest in biological topics relevant to everyday life and future vocations (Mutanen & Uitto, 2020). However, current science curricula, including biology, often lack coherence and relevance for many students, leading to decreased interest in science-based subjects and careers (Ottevanger et al., 2016).

Research indicates that teacher competence significantly impacts student outcomes in science education. Teacher pedagogical content knowledge, self-efficacy, and enthusiasm positively influence students' interest and achievement in elementary science (Fauth et al., 2019). A study of biology teachers in select schools found them generally competent in subject content, instruction, and assessment practices, though some deficiencies were noted (Salaguinto, 2024). Nigeria experiences similar issues, including bureaucratic bottlenecks, lack of transparency, and inadequate funding in its recruitment process. To address these challenges, suggestions include policy reforms, increased financing, and merit-based selection criteria. Implementing these changes could improve the recruitment process and, consequently, the quality of education in secondary schools (Abimbowo & Issa, 2024).

Recent research highlights the limitations of traditional lecture-based instruction in biology education and emphasizes the benefits of interactive and inquiry-based approaches. Traditional methods often struggle to fully engage students and foster deep comprehension (Egamberdiyeva Nigora Akhmadkulovna, 2024). In contrast, interactive teaching methods, such as hands-on experiments, group discussions, and technology-enhanced learning, stimulate curiosity and critical thinking (Egamberdiyeva Nigora Akhmadkulovna, 2024).

Research indicates that learning resources, particularly audiovisual aids, play a crucial role in enhancing biology education. Studies have shown a positive relationship between available learning resources and students' academic performance in biology (Etim, 2021). Recent studies have highlighted challenges in biology education in Nigeria. Action research has shown that redesigned course materials with higher cognitive levels can significantly improve student achievement in biology (Udeani et al., 2016). However, a lack of functional audio-visual instructional aids in higher institutions hinders effective teaching and learning (Suraj et al., 2021). While the use of instructional

materials shows positive results, teachers face challenges such as inadequate lecture periods, poor monitoring, and lack of technical assistance (Suraj et al., 2021).

Research indicates that school infrastructure and environment play a crucial role in shaping the effectiveness of biology education. Well-designed and equipped school facilities, including functional laboratories, contribute significantly to student achievement and overall educational quality (Deassy Yunita et al., 2023).

Students' attitudes and motivation towards biology reveal several key findings. Students' interest and attitude towards biology are significantly correlated with their academic performance (Awodun Adebisi Omotade et al., 2016). Biology pre-service teachers in Nigeria demonstrate readiness to implement ICT skills in teaching and learning, showing confidence, awareness, motivation, and knowledge. However, they lack necessary equipment (Francisca & Samsudin, 2018). These findings suggest a need for improved resources, teacher training, and infrastructure to enhance biology education in Nigeria.

This research aims to address the gaps in resources, teacher training, and infrastructure, ultimately improving the teaching and learning outcomes in biology. With enhanced teacher competence, better teaching methods, adequate resources, and improved school environments, biology education can become more effective and engaging for students in secondary schools.

Methodology

The study employed a survey method using structured questionnaires for both teachers and students, where the variables were not directly manipulated by the researcher. The teachers' survey gathered information on curriculum delivery, qualifications, teaching methods, and the availability of teaching resources, while the students' survey focused on their interest, perceptions, competencies, and attitudes toward Biology. Quantitative methods were used to assess the respondents' knowledge, attitudes, and beliefs (Berg, 2005; Bouma, 2015).

The study involved five randomly selected secondary schools, with five biology teachers from each school participating in the survey. Ten students from each class (SS1, SS2, SS3) were surveyed, using random stratified sampling to select the students.

Primary data was collected through questionnaires and interviews. Teachers completed their own questionnaires, while students were guided by the researcher. The questionnaires included both open and closed-ended questions, such as Likert-type items, and were selected for their efficiency in administering to a large group and simplifying data analysis.

To ensure reliability, the study aimed for consistent results, where the findings would be repeatable under similar conditions (Moskal et al., 2010). For validity, the questionnaires were tested in three additional schools to ensure they measured the intended constructs accurately.

The data was analyzed using qualitative methods, with statistical calculations performed through SPSS and MS Office Excel, presenting the results in percentages based on the respondents' answers.

Results

Answer to Research Questions

Research question one

What is the effect of teacher competence on the effectiveness of learning Biology in secondary schools in Borno State?

Table 1. Answers to Research Question One

	Statement	SD	D	N	A	SA	Mean
1.	My biology teacher is knowledgeable about the subject.	16	15	10	44	65	3.85
2.	My biology teacher uses real-life examples to explain concepts effectively.	33	20	18	38	41	3.23
3.	My biology teacher makes complex biology topics easier to understand.	22	13	20	35	60	3.65
4.	My biology teacher manages the classroom well to support learning.	28	19	15	43	45	3.39
5.	My biology teacher uses different teaching methods to make learning engaging (like experiments or group work).	14	23	28	44	41	3.50
6.	My biology teacher regularly assesses our understanding through quizzes and assignments.	12	30	22	40	46	3.52
7.	My biology teacher is approachable and available for extra help outside class.	30	20	27	50	23	3.11
8.	My biology teacher gives constructive feedback on my assignments and tests.	26	31	28	27	38	3.13
9.	My biology teacher motivates me to study and pursue Biology.	12	29	15	43	51	3.61
10.	Overall, my biology teacher's competence positively impacts my performance and interest in Biology.	14	43	18	45	30	3.23
	Average Mean						**3.42**

The table reflects students' perceptions of their biology teacher's effectiveness, with varying degrees of agreement across different aspects of teaching. A significant strength lies in the teacher's knowledge of the subject, as indicated by a high mean score of 3.85 for the statement "My biology teacher is knowledgeable about the subject." This suggests that students recognize the teacher's expertise in biology, which is essential for providing accurate and reliable information to support student learning. Additionally, the teacher's ability to make complex topics more accessible, with a mean score of 3.65, indicates that students appreciate the teacher's efforts in simplifying challenging material, which helps in enhancing comprehension and retention of difficult concepts.

The teacher's use of engaging teaching methods, such as hands-on experiments and group work (mean score of 3.50), is also seen as a strength. This suggests that the teacher incorporates a variety of strategies to make lessons more interactive and engaging, which can foster curiosity, critical thinking, and deeper understanding among students. The

regular assessment of students' understanding through quizzes and assignments (mean score of 3.52) is another positive aspect, as it indicates that the teacher actively monitors student progress, reinforcing learning and providing opportunities for feedback and improvement.

However, the responses related to teacher approachability (mean score of 3.11) and feedback (mean score of 3.13) indicate areas for improvement. While some students find the teacher approachable and available for extra help, others may feel that they do not have adequate access to the teacher outside of class, which could hinder additional learning support. Similarly, while the teacher provides feedback on assignments and tests, the neutral mean score suggests that students may not always find the feedback detailed or timely enough to be fully helpful in improving their performance.

Lastly, the statement "Overall, my biology teacher's competence positively impacts my performance and interest in Biology" received a mean score of 3.23, which suggests that while students generally agree that the teacher's competence contributes positively to their academic outcomes and interest in the subject, there may still be areas where the teacher could further inspire or motivate students. The sectional mean of 3.42 reflects a generally positive assessment of the teacher's performance, indicating that students appreciate the teacher's expertise and teaching methods but also point to potential areas for improvement, particularly in teacher-student interactions, classroom management, and feedback processes.

Research questions two:

How does the lack of teaching resources impact the effective teaching and learning of Biology in secondary schools in Borno State?

Table 2. Answers to Research Question Two

S/N	Statement	SD	D	N	A	SA	Mean
1.	To what extent does the lack of adequate teaching resources (e.g., textbooks, laboratory equipment) affect your understanding of Biology in school	14	17	14	42	63	3.82
2.	Do you believe that the absence of sufficient teaching materials limits the effectiveness of your biology lessons	28	33	15	40	34	3.13
3.	How does the lack of practical teaching resources, like laboratory tools, influence your ability to grasp Biology concepts	27	23	15	35	50	3.39
4.	In your opinion, how does the shortage of visual aids (such as charts, models, and videos) hinder your learning experience in Biology	25	24	12	46	43	3.39
5.	Do you feel that the absence of sufficient biology textbooks affects your ability to study and prepare for exams	34	23	28	34	31	3.03

6.	How often do you encounter challenges in conducting Biology experiments due to the lack of necessary laboratory resources	14	36	22	38	40	3.36
7.	To what extent do you think the lack of teaching resources reduces the overall quality of Biology education in your school	32	30	27	38	23	2.93
8.	How does the scarcity of technology (like computers and projectors) in your biology class affect your learning experience	31	28	31	27	33	3.02
9.	Do you believe that the lack of teaching resources contributes to a lack of interest or motivation in studying Biology	16	25	17	41	51	3.57
10.	In your opinion, how does the inadequate provision of teaching resources impact your teacher's ability to deliver effective Biology lessons	17	40	21	43	29	3.18
	Average Mean						**3.28**

The table reveals how the lack of teaching resources impacts various aspects of Biology education. Respondents strongly agree (Mean = 3.82) that the absence of adequate teaching resources, such as textbooks and laboratory equipment, significantly affects their understanding of Biology. The lack of teaching materials is seen as moderately limiting the effectiveness of lessons (Mean = 3.13), and the absence of practical resources like laboratory tools is perceived to moderately influence their ability to grasp Biology concepts (Mean = 3.39). Similarly, the shortage of visual aids and textbooks is considered to have a moderate impact on learning (Means = 3.39 and 3.03, respectively). Challenges in conducting experiments due to resource shortages (Mean = 3.36) and the scarcity of technology (Mean = 3.02) are also viewed as moderate hindrances to effective learning. Although the lack of teaching resources is recognized as affecting the overall quality and interest in Biology, the impact on the teacher's ability to deliver lessons is considered somewhat less severe (Mean = 3.18). Overall, the table indicates that while resource shortages are seen as significant barriers to effective Biology education, their influence is perceived to be moderate rather than extreme in most areas.

Research questions three:

Is the teaching and learning environment conducive for the teaching and learning of Biology in secondary schools in Borno State?

Table 3. Answers to Research Question Three

S/N	Statement	SD	D	N	A	SA	Mean
1.	To what extent do you think the physical classroom environment supports effective biology learning	10	17	10	46	67	3.82

2.	Do you believe the seating arrangement in your biology classroom is conducive to collaborative learning and group discussions	25	33	10	43	39	3.13
3.	How would you rate the availability of adequate space and ventilation in your biology classroom for effective learning	26	28	13	33	50	3.39
4.	Do you think the level of noise in the classroom affects your ability to concentrate during Biology lessons	25	23	10	48	45	3.38
5.	How does the cleanliness and general maintenance of the biology classroom impact your learning experience	34	23	15	44	34	3.14
6.	In your opinion, does the availability of sufficient lighting in the biology classroom contribute positively to your learning environment	14	36	10	48	42	3.36
7.	How often do you face distractions in the classroom that hinder your ability to focus on biology lessons?	28	30	29	38	25	2.93
8.	Do you think that the availability of laboratory space and equipment enhances your understanding of biology concepts	30	18	14	50	38	3.04
9.	How conducive do you find the overall school environment (e.g., sanitation, infrastructure, safety) for learning biology	25	16	10	45	54	3.57
10.	Do you feel that the school administration supports the creation of a conducive learning environment for the teaching of biology	17	30	32	43	28	3.13
	Average Mean						**3.29**

The table provides an analysis of students' perceptions of various factors influencing the learning environment in Biology classes. The highest mean score of 3.82 is for the statement about the physical classroom environment supporting effective Biology learning, indicating that students generally agree that the physical setup is conducive to learning. On the other hand, the lowest mean score of 2.93 is for the statement about facing distractions in the classroom, suggesting that students frequently encounter challenges that hinder their focus. Other statements, such as the availability of adequate space and ventilation (mean score 3.39), and the level of noise affecting concentration (mean score 3.38), also reflect moderately positive perceptions. The availability of laboratory space and equipment (mean score 3.04) and the overall school environment's conduciveness to learning (mean score 3.57) are rated similarly, indicating some areas for improvement. The mean score of 3.13

regarding the school administration's support for a conducive learning environment suggests a somewhat positive but not overwhelmingly strong perception. Overall, the results show a mixture of positive and neutral responses, with some room for improvement, particularly in reducing distractions and enhancing laboratory resources.

Research questions four:

How does the teaching method used affect the teaching and learning of Biology in secondary schools in Borno State?

Table 4; Answers to Research Question Four

S/N	Statement	SD	D	N	A	SA	Mean
1.	The teaching methods used in Biology classes are effective in helping me understand key concepts.	13	14	8	58	57	3.94
2.	Group discussions and collaborative activities during Biology lessons improve my learning experience.	10	8	14	64	54	3.97
3.	Practical laboratory sessions significantly enhance my understanding of Biology topics.	8	12	15	71	44	3.91
4.	The teaching methods in my biology class are engaging and make the subject interesting.	20	9	7	60	54	3.84
5.	Traditional teaching methods, such as lectures, are sufficient for learning Biology effectively.	42	28	26	43	11	2.65
6.	The lack of variety in teaching methods negatively affects my interest in Biology.	15	36	21	41	37	3.41
7.	Teachers in my school often use technology (e.g., videos, presentations) to teach biology effectively.	37	38	17	38	20	2.80
8.	There are adequate resources (e.g., laboratory equipment) to support the teaching methods used in Biology.	21	45	31	20	33	3.07
9.	I believe that the teaching methods in biology classes prepare me well for exams and assessments.	25	16	17	41	51	3.57
10.	The teaching methods used in biology help me connect theoretical knowledge to real-life applications.	17	30	21	43	39	3.48
	Sectional Mean						**3.46**

The table reveals that interactive and practical teaching methods, such as group discussions and laboratory sessions, are highly valued by respondents, with mean scores close to 4.0, indicating strong agreement on their effectiveness in enhancing learning and

engagement. Traditional lecture-based methods received lower approval (Mean = 2.65), suggesting they are insufficient on their own. While teaching methods are generally seen as effective in preparing students for exams (Mean = 3.57) and linking theory to real-life applications (Mean = 3.48), the integration of technology and adequacy of resources received mixed responses, highlighting areas for improvement. Overall, the findings emphasize the need for diverse, interactive approaches to maintain interest and improve learning outcomes in Biology.

Discussion of the Findings

Empirical evidence consistently underscores the importance of teacher competence in fostering effective learning outcomes in Biology education. The study revealed that while teachers in Biu secondary schools possess adequate subject knowledge and can simplify complex topics, their limited accessibility and insufficient feedback mechanisms hinder optimal student support. (Fauth et al.; 2019). Highlighted that teachers' pedagogical content knowledge and self-efficacy significantly influence student interest and achievement in science education. Furthermore, (Abimbowo & Issa, 2024) emphasized that professional development opportunities are critical for equipping teachers with modern teaching strategies, a gap evident in this study's findings.

The lack of adequate teaching resources emerged as a significant barrier to effective Biology education in the study. Respondents reported that insufficient laboratory equipment, outdated textbooks, and limited visual aids hindered their ability to grasp complex biological concepts. This finding aligns with (Etim, 2021), who found a strong correlation between the availability of instructional materials and student performance in science subjects. (Suraj et al.; 2021) also noted that resource inadequacies in Nigerian schools, particularly in science education, limit practical learning opportunities, ultimately affecting academic outcomes.

The physical learning environment was found to moderately support Biology education, with some schools offering adequate space, ventilation, and lighting. However, challenges such as noise, distractions, and insufficient laboratory facilities undermined the overall effectiveness of the learning environment. (Deassy Yunita et al.; 2023) Demonstrated that well-maintained school infrastructure, including functional laboratories, plays a critical role in improving educational quality and student achievement. The findings in this study reflect a broader trend in Nigerian schools, where infrastructural deficits remain a significant obstacle to effective teaching and learning.

The teaching methods employed in Biology classrooms also showed mixed effectiveness. Students expressed a strong preference for interactive and student-centred approaches, such as group discussions and laboratory experiments, which were seen as highly effective in enhancing engagement and comprehension. These findings align with (Akhmadkulovna, 2024), who advocated for inquiry-based learning methods to improve science education outcomes. However, the continued reliance on traditional lecture-based instruction, as noted in the study, is consistent with (Ottevanger et al.; 2016), who argued that conventional methods often fail to promote critical thinking and practical application in science subjects.

The broader implications of these findings highlight systemic challenges in Biology education, including teacher training gaps, resource inadequacies, and suboptimal teaching methods. (Udeani et al.; 2016), Emphasized that targeted interventions, such as enhancing

teacher capacity and redesigning course materials, can significantly improve student outcomes. (Akiri, 2009) further stressed the importance of motivation and innovative strategies in sustaining student interest in science subjects like Biology. Addressing these challenges through comprehensive reforms can foster an enabling environment for effective Biology education in secondary schools.

Conclusion

The following conclusions were made:

1. **Effect of Teacher Competence on Learning Biology**
   The study concluded that teacher competence significantly impacts the effectiveness of Biology education. While teachers demonstrated adequate subject knowledge and the ability to simplify complex topics, gaps in accessibility and feedback mechanisms were identified. This indicates a need for enhanced professional development to equip teachers with modern teaching strategies and improve their engagement with students.
2. **Impact of Lack of Teaching Resources on Biology Education**
   The absence of adequate teaching resources, including laboratory equipment, textbooks, and visual aids, was found to hinder the effective teaching and learning of Biology. These resource inadequacies limit practical learning opportunities and reduce students' ability to grasp complex biological concepts, thereby impacting overall academic performance.
3. **Conduciveness of the Teaching and Learning Environment**
   The study found that the physical learning environment moderately supports Biology education. While some schools offer adequate space, ventilation, and lighting, issues such as noise, distractions, and insufficient laboratory facilities undermine the learning experience. A more conducive environment, with better infrastructure and fewer distractions, is essential for effective Biology education.
4. **Effectiveness of Teaching Methods in Biology Education**
   Interactive and student-centred teaching methods, such as group discussions and laboratory experiments, were highly effective in enhancing student engagement and comprehension. However, the reliance on traditional lecture-based methods limits critical thinking and practical application. The integration of diverse and innovative teaching strategies is necessary to improve learning outcomes in Biology.
5. **Overall Challenges Affecting Biology Education**
   The study identified systemic challenges, including inadequate teacher training, insufficient resources, suboptimal learning environments, and outdated teaching methods. Addressing these issues holistically through targeted interventions and policy reforms is critical for improving the quality of Biology education in secondary schools.

Recommendations

The following recommendations were made:

1. Teacher Competence: Organise regular in-service training and workshops to improve teaching skills. Encourage teachers to pursue advanced certifications in Biology education and establish mentorship programmes for guidance from experienced educators.
2. Teaching Resources: Provide essential resources such as laboratory equipment, textbooks, and visual aids. Implement policies to ensure equitable distribution of resources, particularly in underserved areas. Invest in

digital teaching aids and tools to enhance traditional learning methods.

3. Learning Environment: Improve classroom infrastructure by ensuring adequate space, ventilation, lighting, and soundproofing. Equip schools with functional and well-maintained laboratories. Strengthen administrative support to create a positive, distraction-free environment.
4. Teaching Methods: Promote interactive, student-centred approaches, such as inquiry-based learning and group discussions. Integrate technology, including multimedia tools and virtual labs, into teaching practices. Reduce reliance on lecture-based methods by adopting strategies that connect theory to real-life applications.
5. Systemic Challenges: Increase education funding to address gaps in teacher training, resources, and infrastructure. Implement transparent recruitment processes to ensure the employment of only qualified teachers. Develop monitoring and evaluation frameworks to assess and improve educational standards.

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