

Assessment of Principals' Perception on Implementation of Sustainable Development Goal-4 in Public Secondary School in Zaria Educational Zone, Kaduna

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DOI: <https://doi.org/10.5281/zenodo.19396215>

Abstract

The study examined principals' perceptions on implementation of SDG-4 in secondary schools. The objectives of the study were to examine principals' perceptions of the strategies used to implement SDG-4, identify principals' perceptions of the challenges affecting its effective implementation, and assess principals' perceptions of the extent to which SDG-4 implementation has been achieved in the Zaria Educational Zone. A descriptive survey was adopted, and a population of 73-principals from the study area was used. Census sampling was employed due to the manageable population size. A structured questionnaire titled Assessment of Principals' Perception on the Implementation of SDG-4 (APPISDG) was used for data collection. Content validity was established through three experts' review. Reliability of 0.75 was determined using Cronbach's Alpha, indicating it acceptable for research. Data were analysed using frequency counts with a criterion mean of 2.50. The results show that principals perceive their leadership practices as effectively supporting key areas of SDG-4, with a grand mean of 3.10, indicating strong alignment with global standards for equitable and quality education. Findings further revealed that principals widely agree, as indicated by a grand mean of 3.15, that several challenges hinder effective SDG-4 implementation in Zaria Educational Zone. Additionally, principals view SDG-4 implementation as moderately successful, with a grand mean of 2.92, reflecting improvements in teaching quality and learner support. Conclusion, principals generally hold positive perceptions of SDG-4 implementation strategies; however, limited funding and inadequate materials continue to impede full realization of the goal. The study recommends increased funding and strengthened support programmes to enhance and sustain effective SDG-4 implementation among others.

Keyword: Educational-Zone, Goal-4, Implementation, Secondary Schools, Sustainable Development

Introduction

Education remains one of the most powerful tools for transforming individuals, communities, and nations. Recognizing this, the 2030 Agenda for Sustainable Development, agreed by all UN Member States in 2015, establishes a comprehensive global framework for peace and prosperity. It establishes 17 Sustainable Development Goals (SDGs) to guide economic, social, and environmental growth until 2030, with SDG-4 specifically dedicated to ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. This goal emphasizes that every child, regardless of background or location, should have access to meaningful learning experiences, qualified teachers, safe learning environments, and relevant resources that support their development (Ogwu, Samaila, Levi, & Lawal, 2025). For developing countries like Nigeria, achieving SDG 4 is not only a global commitment but also a national priority, especially as education plays a central role in human capital development and socioeconomic progress.

Salihu, Samaila, and Ogwu (2025) argued that secondary schools in Nigeria constitute an important level of the educational system because they bridge the gap between basic education and higher learning. The responsibility for translating national and global education policies into concrete actions at the school level rests significantly on school principals. They serve as instructional leaders, administrators, and policy implementers who influence the quality of teaching, learning outcomes, and school improvement initiatives. Therefore, understanding principals' perceptions of the implementation of SDG 4 is crucial, as their views reflect what is happening at the grassroots level and highlight areas that need attention.

Within the Zaria Educational Zone of Kaduna State, public secondary schools operate in diverse social, economic, and infrastructural conditions. The extent to which SDG 4 is being implemented in these schools depends largely on how principals interpret the goal, the strategies they adopt, and the support they receive from government and stakeholders. Principals may employ a variety of strategies such as promoting teacher capacity development, ensuring effective curriculum delivery, improving student monitoring systems, fostering inclusive practices, strengthening school-community partnerships, and ensuring that learning environments are safe and conducive. These strategies are essential for achieving quality education, yet their effectiveness is often shaped by the realities on the ground.

Despite ongoing efforts, many public secondary schools in Nigeria still struggle with challenges that hinder full implementation of SDG 4 (Ogu & Godspower-Chike, 2025). Issues such as inadequate funding, shortage of qualified teachers, overcrowded classrooms, insufficient teaching and learning materials, poor infrastructure, and limited professional development opportunities for educators continually affect school operations. Principals also face administrative burdens, policy inconsistencies, and limited autonomy, all of which influence their ability to lead effectively. Their perception of these challenges provides valuable insights into what slows down progress toward achieving quality education (Ogwu, Deyin, Mubarak, & Hassan, 2025).

Equally important is the need to assess how much progress has been made so far. The extent to which SDG 4 implementation has been achieved in public secondary schools can be seen in improved learning outcomes, increased access and retention of students, enhanced inclusiveness, teacher effectiveness, and the overall quality of the school environment. Principals, being at the forefront of school management, are well-positioned to evaluate these indicators based on their day-to-day experiences and interactions within the school system.

Given the central role of principals, their perceptions offer a realistic picture of the successes, gaps, and opportunities surrounding SDG 4 implementation. Assessing their views in the context of Zaria Educational Zone is therefore vital for informing educational planning, guiding policy decisions, and improving ongoing interventions aimed at achieving quality education for all. This study seeks to explore these perceptions by examining the strategies in use, the challenges encountered, and the overall progress toward realizing SDG 4 in public secondary schools in the zone.

Theoretical Framework

This study is grounded in James MacGregor Burns' Transformational Leadership Theory (1978), which focuses on leaders' ability to inspire meaningful change, improve practices, and create a shared vision. These qualities are particularly relevant for achieving Sustainable Development Goal 4 (SDG 4), which seeks inclusive and equitable quality education. Magdaraog (2025) stated that meeting this goal requires school principals who can motivate teachers, shape school culture, and drive continuous improvement in teaching and learning.

In schools, principals do more than manage administrative tasks because they guide instruction, encourage innovation, and support teachers in delivering effective learning experiences. Thus, Septariani (2024) argue that Transformational Leadership Theory helps explain how a principal's values, beliefs, and vision influence the strategies they use. Nevertheless, Principals with a clear commitment to quality education are more likely to take proactive actions, inspire teacher commitment, and foster inclusive, improving learning environments.

The theory also sheds light on why some principals are more successful in advancing SDG 4 than others. Leadership style affects how challenges are addressed, resources are allocated, and teacher performance is managed. Transformational leaders tend to motivate staff, encourage professional growth, and promote collaboration, all of which enhance teaching quality and student outcomes.

Statement of the Problem

Although Sustainable Development Goal 4 emphasizes the need for inclusive, equitable, and quality education, the reality in many public secondary schools across Nigeria including those in the Zaria Educational Zone suggests that the implementation of this global aspiration remains uneven and uncertain. While policies supporting SDG 4 exist at national and state levels, the real test of their success lies in how effectively they are translated into everyday school practices. This responsibility falls largely on school principals, whose leadership, decisions, and perceptions shape the direction and quality of education delivered in their schools.

However, what remains unclear is the extent to which principals truly understand and apply the goals and requirements of SDG-4 in their schools. Although some principals adopt strategies such as teacher professional development, improved curriculum delivery, and student support mechanisms, the consistency and effectiveness of these strategies vary widely. Many schools continue to face persistent challenges such as inadequate funding, shortage of qualified teachers, overcrowded classrooms, poor infrastructure, and limited instructional materials. These issues raise questions about how much progress has genuinely been made toward achieving quality education as envisioned by SDG-4.

Furthermore, educational stakeholders lack sufficient empirical evidence on how principals perceive the progress made so far, the obstacles they encounter, and the adequacy of the strategies being used to

implement SDG 4. Without understanding principals' perspectives, it becomes difficult for policymakers and administrators to design meaningful interventions, allocate resources appropriately, or monitor improvements effectively.

Therefore, there is a pressing need to assess principals' perceptions of SDG 4 implementation in public secondary schools within the Zaria Educational Zone. Such an assessment is essential for determining whether current efforts are adequate, identifying areas that require improvement, and ensuring that the goal of providing quality education for all is realistically achievable. This study seeks to fill this gap by examining the strategies employed, the challenges faced, and the perceived extent of progress toward realizing SDG 4 in these schools.

Objectives of the Study

- 1:** To examine principals' perceptions on the strategies used to implement Sustainable Development Goal 4 (Quality Education) in public secondary schools in Zaria Educational Zone.
- 2:** To identify principals' perceptions on the challenges affecting the effective implementation of SDG 4 (Quality Education) in public secondary schools in Zaria Educational Zone.
- 3:** To assess principals' perceptions on the extent to which SDG 4 implementation has been achieved in public secondary schools in Zaria Educational Zone.

Research Questions

- 1:** What are the principals' perceptions on the strategies used to implement Sustainable Development Goal 4 (Quality Education) in public secondary schools in Zaria Educational Zone?
- 2:** What challenges do principals perceive as affecting the effective implementation of SDG 4 (Quality Education) in public secondary schools in Zaria Educational Zone?
- 3:** What are the principals' perceptions on the extent to which SDG 4 implementation has been achieved in public secondary schools in Zaria Educational Zone?

Methodology

The study adopted a descriptive survey research design. The study population consisted of 73 principals from public secondary schools within the Zaria Educational Zone, as documented by the Zaria Educational Board. Owing to the relatively small and manageable size of the population, a census sampling technique was adopted, thereby including all 73 respondents as the sample size for the study. This approach enhanced the representativeness of the data and minimized sampling error (Singh & Masuku, 2014). The instrument used for data collection was questionnaire title; Assessment of Principals' Perception on the implementation of of SDG-4 (APPISDG).

The instrument consisted of three sections designed to collect data for the study, and it was structured on a four-point rating scale. The questionnaire was validated by three experts: one from Measurement and Evaluation, one from Educational Administration, and one from the Linguistics Department. The reliability of the instrument was determined using Cronbach's Alpha, which yielded a coefficient of 0.75. According to Noor and Fuzi (2025), a coefficient of 0.70 or above is considered acceptable in social science research, indicating that the instrument was sufficiently reliable for the study. Due to the small manageable sample size, all 73 copies of the questionnaires administered, were completed and returned, resulting in a 100% response rate. Data collected were analyzed using frequency counts and a criterion mean of 2.50.

Results

Research Question 1: What are the principals' perceptions of the strategies used to implement Sustainable Development Goal-4 (Quality Education) in public secondary schools in Zaria Educational Zone?

Table 1: Principals' Perceptions of the Strategies Used to Implement Sustainable Development Goal-4

No.	Statement	SA	A	D	SD	Mean	S. D	Remark
1	My school provides regular professional development opportunities to improve teachers' instructional skills.	25	34	7	7	3.18	.96	Agree

2	I encourage teachers to adopt inclusive teaching practices that address the diverse learning needs of students	19	39	8	7	3.22	1.02	Agree
3	I consistently monitor teaching and learning processes to ensure curriculum effectiveness	26	30	10	7	3.04	1.03	Agree
4	I put strategies in place to support students who are at risk of dropping out or performing poorly	14	26	10	23	2.58	1.13	Agree
5	I promote collaborative planning among teachers to enhance lesson delivery and student learning outcomes	22	34	5	12	3.16	.94	Agree
6	I make deliberate efforts to create a safe, supportive, and conducive learning environment	12	44	7	10	3.27	1.03	Agree
7	I actively engage parents and the community in activities that support students' learning and school improvement.	20	39	4	10	3.29	.90	Agree
Grand Mean						3.10		

Source: Fieldwork, 2025

The results in Table 1 shows Principals' Perceptions on the Strategies used to Implement Sustainable Development Goal-4 in public secondary schools. Thus, the result shows that principals agreed that they provide regular professional development opportunities to improve teachers' instructional skills, they also encourage teachers to adopt inclusive teaching practices that address the diverse learning needs of students, they consistently monitors teaching and learning processes to ensure curriculum effectiveness, they put strategies in place to support students who are at risk of dropping out or performing poorly, promote collaborative planning among teachers to enhance lesson delivery and student learning outcomes, make deliberate efforts to create a safe, supportive, and conducive learning environment, and they actively engage parents and the community in activities that support students' learning and school improvement. This was evident by mean responses greater than 2.50 for all items. The grand mean score of 3.10 suggests that a significant proportion of principals Strategies used to Implement Sustainable Development Goal-4 in public secondary schools was effective.

Research Question 2: What challenges do principals perceive as affecting the effective implementation of SDG-4 (Quality Education) in public secondary schools in Zaria Educational Zone?

Table 2: Principals’ Perceptions of the Challenges Affecting the Effective Implementation of SDG-4 (Quality Education)

No.	Statement	SA	A	D	SD	Mean	S. D	Remark
8	Insufficient funding limits the school’s ability to implement quality education initiatives	15	46	5	7	3.39	.92	Agree
9	The school lacks adequate instructional materials and teaching resources	9	18	9	37	2.50	1.00	Agree
10	Shortage of qualified teachers affects effective curriculum delivery	11	50	5	7	3.45	.93	Agree
11	Overcrowded classrooms make it difficult to provide quality and inclusive instruction.	25	41	2	5	3.44	.75	Agree
12	Inadequate school infrastructure (e.g., classrooms, laboratories, libraries) hinders the implementation of SDG 4	19	40	6	8	3.27	.96	Agree
13	Teachers’ limited access to continuous professional development affects teaching quality	6	60	5	2	3.66	.84	Agree
14	High teacher workload reduces the effectiveness of SDG 4-related activities	13	17	13	30	2.47	1.04	Disagree
Grand Mean						3.15		

Source: Fieldwork, 2025

The results in Table 2 shows Principals’ Perceptions on the Challenges Affecting the Effective Implementation of SDG-4 in Zaria Education Zone. The results shows that principals agreed that: insufficient funding limits the school’s ability to implement quality education initiatives, the school lacks adequate instructional materials and teaching resources, shortage of qualified teachers affects effective curriculum delivery, overcrowded classrooms make it difficult to provide quality and

inclusive instruction, inadequate school infrastructure (e.g., classrooms, laboratories, libraries) hinders the implementation of SDG-4, and teachers' limited access to continuous professional development affects teaching quality. This was evident by the mean responses greater or equal to 2.50 for items 8, 9, 10, 11, 12, and 13. In contrast, the result shows that principals disagreed that high teacher's workload reduces the effectiveness of SDG-4 related activities. This was evident by the mean responses less than 2.50 for items 14. Generally, the result reveals that principals agreed on the challenges affecting the effective implementation of SDG-4 in Zaria Education Zone. This was evident by a grand mean of 3.15

Research Question 3: What are the principals' perceptions of the extent to which SDG-4 implementation has been achieved in public secondary schools in Zaria Educational Zone?

Table 3: Principals' Perceptions of the Extent to which SDG-4 Implementation has been achieved in Public Secondary Schools

No.	Statement	SA	A	D	SD	Mean	S. D	Remark
15	The school has achieved significant improvement in students' enrolment compared to previous years	9	18	18	28	2.37	1.11	Disagree
16	Students from disadvantaged backgrounds are enrolled and supported to a high extent	26	31	11	5	3.05	1.05	Agree
17	The school has largely eliminated barriers that prevent students from accessing education.	12	14	13	34	2.37	.99	Disagree
18	Teachers in the school demonstrate improved pedagogical practices to a high extent	24	34	7	8	3.16	.97	Agree
19	Student-centered teaching methods are applied to a very high extent	30	33	6	4	3.23	.89	Agree
20	The school has achieved strong improvements in students' academic learning outcomes	13	47	6	7	3.38	.97	Agree
21	Continuous assessment practices are implemented effectively to a high extent	40	15	8	10	2.85	.88	Agree
Grand Mean						2.92		

Source: Fieldwork, 2025

The results in Table 3 shows Principals' Perceptions on the Extent to which SDG-4 Implementation has been achieved in Public Secondary Schools. The results displays that principals agreed that students from disadvantaged backgrounds are enrolled and supported to a high extent, teachers in the school demonstrate improved pedagogical practices to a high extent, Student-centred teaching methods are applied to a very high extent, the school has achieved strong improvements in students' academic learning outcomes, and that continuous assessment practices are implemented effectively to a high extent. This was made evident by the mean responses greater than 2.50 for items 16, 18, 19, 20, and 21. In contrast, the result shows that principals disagreed that the school has achieved significant improvement in students' enrolment compared to previous years, and that the school has largely eliminated barriers that prevent students from accessing education. This was evident by the mean responses less than 2.50 for items 15 and 17. Generally, the result reveals that principals from Zaria Educational Zone agreed regarding the extent to which SDG 4 implementations has been achieved in Public Secondary Schools

Discussion of Findings

The findings for Research Question One indicate that principals in the Zaria Educational Zone perceive the strategies for implementing Sustainable Development Goal 4 (SDG 4) in public secondary schools positively. All assessed strategies recorded mean scores above 2.50, reflecting strong agreement on their effectiveness. Principals reported supporting teacher professional development, promoting inclusive teaching, monitoring learning outcomes, assisting at-risk students, fostering collaboration among teachers, and maintaining safe, supportive learning environments. They also engage parents and communities in school improvement initiatives. The overall grand mean of 3.10 suggests that these leadership practices effectively advance SDG 4, aligning with global standards for equitable, quality education. This is in line with the findings of Leithwood (2021) which state strong transformative school leadership contributes significantly to inclusive, equitable, and quality education.

The findings for Research Question Two reveal that principals in the Zaria Education Zone perceive several challenges hindering the effective implementation of SDG 4 in public secondary schools. With mean scores above 2.50, principals identified insufficient funding, inadequate instructional materials, shortages of qualified teachers, and overcrowded classrooms as major barriers. Limited infrastructure,

including classrooms, laboratories, and libraries, alongside restricted access to continuous professional development, also impede quality education and inclusive teaching. Principals disagreed that high teacher workload is a significant factor. The overall grand mean of 3.15 reflects broad agreement that multiple systemic challenges constrain the realization of SDG 4 in the zone. These results align with research of Sharma and Raina (2025) which states that systemic challenges such as insufficient funding, inadequate infrastructure, shortages of qualified teachers, and lack of instructional materials significantly hinder the achievement of quality, inclusive education under Sustainable Development Goal 4 (SDG-4).

Research Question three sought to explore principals' perceptions of the extent to which SDG-4 has been achieved in public secondary schools in the Zaria Educational Zone. With the grand mean of (2.92), the findings indicate that principals view implementation as moderately successful, especially regarding teaching quality and learner support. Students from disadvantaged backgrounds receive substantial support, teachers demonstrate improved pedagogical practices, and student-centred teaching methods are widely applied, enhancing academic outcomes. This finding is in line with the study of Ibrahim et al. (2017), which emphasized that transformational school leadership positively influences instructional quality and student outcomes. Continuous assessment practices also shows progress toward quality education. However, principals noted, teaching quality and student support have improved, but access and equality in education are still a challenge.

Conclusions

The findings indicate that principals in the Zaria Educational Zone positively perceive the strategies used to implement SDG-4, with strong efforts in teacher development, inclusive teaching, student support, and community engagement contributing to improved learning outcomes. However, systemic challenges such as inadequate funding, limited instructional materials, teacher shortages, and insufficient infrastructure continue to hinder full implementation. While progress has been made in enhancing teaching quality and supporting students, barriers to equitable access and enrolment still persist. Thus, effective leadership practices are advancing SDG 4, but addressing resource and access constraints is essential for achieving inclusive, quality education for all.

Recommendations

Based on the findings of the study, the following recommendations were;

1. Ministry of Education should establish a structured Continuous Professional Development framework for principals. This should include periodic workshops, mentoring programs, peer coaching, and training on inclusive teaching strategies to further enhance teachers' instructional competence and sustain improvements in curriculum delivery.
2. The government should prioritize increased budgetary allocation for education in the Zaria Education Zone. These funding should be directed toward providing classrooms, laboratories, libraries, and essential teaching resources to create a conducive environment for effective SDG 4 implementation.
3. The government and school authorities should intensify outreach programs, scholarship schemes, community sensitization, and support services for disadvantaged families. These efforts will help attract more students and reduce obstacles that hinder enrolment and retention.

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