



ASSESSING ADMINISTRATORS' PERCEPTION OF THE IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT GOAL (4) IN PUBLIC SECONDARY SCHOOLS IN CALABAR EDUCATION ZONE OF CROSS RIVER STATE, NIGERIA



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Abstract

This study investigates administrators' perception of the implementation of Sustainable Development Goal 4 (SDG-4) in public secondary schools within the Calabar Education Zone of Cross River State, Nigeria. Utilizing an ex-post facto research design, the study involved a total of 196 administrators, representing the entire population of principals and vice principals across public secondary schools in the zone. Data were collected using a structured and validated instrument titled: Administrators' Perception of SDG-4 Implementation Survey (APSI-SDG4), which was subjected to expert validation by scholars in Educational Administration at the University of Calabar, and yielded a Cronbach Alpha reliability coefficient ranging from .81 to .87. Descriptive statistics, specifically mean and standard deviation, were employed for data analysis. The findings revealed that administrators generally had low awareness but perceived the implementation of SDG-4 as relevant and timely; however, its effective execution was hindered by challenges such as inadequate infrastructure, limited teacher training, and insufficient funding among other persisting issues. The study concluded that while the awareness and alignment with SDG-4 goals are evident, concrete strategies and investments are required to translate policy into practice. It recommended the strengthening of institutional capacity, increased funding, and integration of SDG-4 indicators into school planning and evaluation mechanisms.

Keywords: Sustainable Development Goal 4, Implementation, Administrators' Perception, Public Secondary Schools.

Introduction

The Sustainable Development Goal (SDG) 4, which focuses on ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all, is a critical global initiative aimed at transforming education systems to meet the needs of a rapidly changing world. In Nigeria, particularly in the Calabar Education Zone of Cross River State, public secondary schools face significant challenges in aligning with the principles of SDG 4 (Onabe, Uzoigwe & Ishaku, 2021). These challenges include inadequate infrastructure, insufficient teaching materials, a lack of professional development for teachers, and limited access to education for marginalized groups. Despite efforts by government and non-governmental organizations to implement policies geared toward achieving SDG 4, the extent to which public secondary schools have embraced and operationalized these initiatives remains unclear. Understanding how school administrators perceive and implement these goals is critical to bridging gaps and addressing systemic barriers to quality education. One of the major problems impeding the implementation of SDG 4 in public secondary schools in the Calabar Education Zone is the disconnect between policy formulation and execution. Administrators,



who play a pivotal role in translating education policies into actionable programs, often face constraints such as inadequate funding, poor monitoring and evaluation frameworks, and a lack of awareness or training on SDG 4 objectives. According to Onabe, Uzoigwe and Ishaku (2021), this disconnect hinders their ability to effectively implement strategies that promote inclusivity, equity, and quality education. Moreover, many schools struggle with overcrowding, insufficient classroom spaces, and inadequate teacher-to-student ratios, which compromise the delivery of quality education. These issues raise concerns about the effectiveness of current administrative practices in achieving the targets of SDG 4 within the region.

Statement of the problem

Sustainable Development Goal 4 (SDG-4) seeks to ensure inclusive, equitable, and quality education for all and promote lifelong learning opportunities. It emphasizes access, equity, quality, and lifelong learning as essential components of a functional education system. In Nigeria, and particularly in Cross River State, various education policies and reforms have been aligned with the targets of SDG-4 to improve educational delivery, especially in public secondary schools. However, despite these efforts, there are persisting concerns about the actual implementation of these goals at the school level. Reports of dilapidated infrastructure, shortage of qualified teachers, inadequate teaching and learning materials, and limited access for marginalized groups continue to undermine the realization of SDG-4 in many parts of the country, including the Calabar Education Zone.

Administrators, such as principals and vice principals, play a critical role in driving educational reforms and ensuring that global education targets like SDG-4 are translated into actionable strategies within schools. Their perceptions offer valuable insights into the extent to which SDG-4 is understood, embraced, and effectively implemented. However, there is a noticeable gap in empirical data capturing how these key stakeholders perceive the implementation process, including the challenges they face and the support systems available to them. Without this information, policy interventions may be poorly targeted, and the efforts toward achieving SDG-4 may remain largely rhetorical rather than practical.

Given the strategic importance of administrators in the educational process, it becomes necessary to assess their perception of the implementation of SDG-4 within the Calabar Education Zone. Understanding their views will not only reveal the strengths and weaknesses of current implementation strategies but also guide educational planners, government agencies, and development partners in designing more responsive and context-specific interventions. This study, therefore, seeks to bridge the existing knowledge gap by examining how administrators perceive the implementation of SDG-4, the extent of progress made, and the factors that may be impeding or facilitating its realization in public secondary schools in the Calabar Education Zone of Cross River State.

Theoretical Framework

This study is anchored on the Transformational Leadership Theory developed by James MacGregor Burns (1978). The theory emphasizes the role of visionary leadership in inspiring and guiding organizational change, particularly through motivation, intellectual stimulation, and individualized support. In the context of implementing Sustainable Development Goal 4 (SDG-4), school administrators serve as transformational leaders who must influence teachers, students, and stakeholders to embrace inclusive and quality education practices. Their perceptions, decisions, and leadership approaches significantly shape the extent to which SDG-4 objectives are internalized and actualized within school environments. Thus, this theory provides a relevant framework for understanding how administrators' leadership perspectives impact the implementation of SDG-4 in public secondary schools.

Empirical Literature Review

Several recent studies have investigated administrators' level of awareness of the goals and targets of Sustainable Development Goal 4 (SDG-4) in public secondary schools. For instance, Yakubu



and Lawal (2023) conducted a study in the North Central zone of Nigeria and found that although most school administrators were generally aware of the existence of SDG-4, their understanding of its specific targets—such as inclusive education, equity, and lifelong learning—was limited. Similarly, Bello and Abubakar (2022) observed that awareness was often shaped by administrators' participation in government-led workshops or donor-supported seminars. These findings suggest that while SDG-4 has gained visibility in educational discourse, the depth of knowledge among administrators is still insufficient for its effective implementation at the grassroots level.

In terms of integration into school policies and practices, empirical evidence indicates that progress has been uneven. Eze and Agbo (2024) reported that only a few public secondary schools in South-Eastern Nigeria had systematically incorporated SDG-4 targets into their strategic plans or operational guidelines. Their study found that where integration existed, it was often influenced by external projects or interventions by NGOs. Likewise, a study by Okeke and Afolabi (2022) in Lagos State revealed that most school improvement plans lacked specific references to global education goals, indicating a gap between national commitments and school-level practices. These findings underscore the need for policy alignment and institutional frameworks that facilitate the localization of SDG-4 in school operations.

Concerning the challenges faced by administrators in implementing SDG-4, several studies point to structural and systemic limitations. Mohammed and Tanko (2023) identified poor funding, shortage of trained teachers, and overcrowded classrooms as key barriers in Kaduna State. Their findings revealed that even where administrators were willing to implement inclusive and quality education practices, limited resources often hindered their efforts. Similarly, Opara and Nwachukwu (2021) noted that administrators in rural parts of Cross River State faced infrastructural decay, irregular teacher training, and lack of digital tools—all of which limited their capacity to deliver education aligned with SDG-4 objectives.

Another major challenge highlighted in the literature is the limited autonomy of school administrators in decision-making. According to Adegoke and Lawani (2022), public secondary school administrators in Nigeria operate under rigid bureaucratic structures that restrict their ability to innovate or allocate resources in alignment with SDG-4 priorities. Their study in Osun State found that administrators often lacked the authority to introduce inclusive programs or initiate capacity-building efforts without approvals from higher authorities. This constraint diminishes their strategic role in translating global education goals into actionable outcomes within their schools.

On the issue of support mechanisms, recent findings reveal that while some support structures exist, they are often fragmented or inconsistent. For example, Umar and Balogun (2023) noted that donor agencies and civil society organizations occasionally provided training and materials on SDG-4 in Borno State. However, these interventions were not always coordinated with government efforts, leading to duplication or gaps. In contrast, a study by Edem and Udo (2024) in Akwa Ibom State highlighted that continuous professional development programmes organized by the Ministry of Education positively influenced administrators' understanding and engagement with SDG-4, suggesting that institutional support, when consistent and structured, can yield measurable improvements. Furthermore, empirical studies suggest that peer collaboration among administrators could serve as an informal yet effective support system. In a qualitative study by Ajibola and Nwosu (2022), principals in Abuja Municipal Council reported learning from each other through informal networks and WhatsApp platforms dedicated to education policy updates. These informal exchanges enabled them to share implementation strategies and challenges, thereby creating a community of practice that supplemented formal training. Such findings point to the potential of leveraging social and professional networks to enhance implementation capacity.

In summary, the empirical literature underscores a significant variation in awareness, integration, and support for SDG-4 implementation across Nigerian public secondary schools. While administrators generally support the goals of inclusive and quality education, they face numerous challenges ranging from limited awareness and poor resource allocation to weak institutional

frameworks. Studies recommend strengthening training programmes, enhancing policy alignment, and increasing administrators' autonomy to bridge the gap between policy and practice. Moreover, support mechanisms must be institutionalized and consistently applied to empower administrators in delivering education that aligns with the targets of SDG-4.

Purpose of the study

The main purpose of this study is to assess administrators' perception of the implementation of Sustainable Development Goal 4 (SDG-4) in public secondary schools within the Calabar Education Zone of Cross River State, Nigeria. Specifically, the study sought:

1. To examine administrators' level of awareness of the goals and targets of SDG-4 in public secondary schools.
2. To assess the extent to which SDG-4 has been integrated into school policies and practices in the Calabar Education Zone.
3. To identify the challenges administrators face in implementing SDG-4 in public secondary schools.
4. To evaluate the support mechanisms available to administrators for the effective implementation of SDG-4 in the study area.

Research questions

The following research questions are raised to guide the study:

3. What is the level of administrators' awareness of the goals and targets of SDG-4 in public secondary schools?
4. To what extent has SDG-4 been integrated into school policies and practices in the Calabar Education Zone?
5. What challenges do administrators face in implementing SDG-4 in public secondary schools?
6. What support mechanisms are available to administrators for the effective implementation of SDG-4 in the study area?

Hypothesis

The following hypothesis was formulated to direct the study:

- There is no significant difference in the perception of male and female administrators towards the implementation of Sustainable Development goal (4) in Calabar Education zone.

Methodology

The study adopted a descriptive survey research design, which was considered appropriate for assessing the perceptions of school administrators on the implementation of Sustainable Development Goal 4 (SDG-4) in public secondary schools in the Calabar Education Zone of Cross River State, Nigeria. This design facilitated the systematic collection, analysis, and interpretation of data from a defined population, enabling the researchers to make informed generalizations regarding administrators' views and experiences. The population of the study comprised 196 public secondary school administrators (principals and vice principals) drawn from schools across the Education Zone. Given the manageable size of the population, a census sampling technique was employed, allowing all administrators to participate in the study. This approach enhanced the representativeness of the data and reduced sampling error. Data were collected using a researcher-developed instrument titled the SDG-4 Implementation Perception Questionnaire (SIPQ). The SIPQ contained 24 structured items, divided into three sections: Section A gathered demographic data; Section B assessed awareness and understanding of SDG-4 targets; and Section C examined perceptions of implementation strategies and D examined constraints and support mechanisms within the school context. The items were developed in alignment with the objectives and were measured on a four-point Likert scale: Strongly Agree (4), Agree (3),

Disagree (2), and Strongly Disagree (1). To establish the content and construct validity of the instrument, three experts in Educational Planning and Educational Measurement and Evaluation reviewed the questionnaire. Their inputs informed revisions for improved clarity, alignment with constructs, and relevance to the study context. A pilot study was conducted using 15 school administrators from outside the Calabar Education Zone. Reliability analysis using Cronbach's Alpha produced a coefficient of 0.84, indicating a high level of internal consistency. Data collection lasted for four weeks and was carried out through both physical and electronic administration of the questionnaire to accommodate varying accessibility preferences among participants. Trained research assistants were deployed to assist in questionnaire distribution, monitoring, and retrieval across the three local government areas. Out of the 196 questionnaires administered, 194 were completed and returned correctly, yielding a 95.9% response rate, which helped minimize data attrition and nonresponse bias. A criterion mean score of 2.50 was adopted for data interpretation. Mean scores of 2.50 and above were considered indicative of a positive perception of SDG-4 implementation, while scores below 2.50 were interpreted as reflecting negative or low perception. This methodological approach ensured the collection of valid and reliable data to examine how school administrators perceive and interpret the ongoing implementation of SDG-4 in public secondary schools across the Calabar Education Zone.

Research question one

What is the level of administrators' awareness of the goals and targets of SDG-4 in public secondary schools?

Table 1: Respondents' mean ratings and standard deviation on the level of administrators' awareness of the goals and targets of SDG-4 in public secondary schools (N = 196)

S/N	Awareness Indicators	N	Mean	S.D.	Decision
1	Administrators are aware that SDG-4 promotes inclusive and equitable quality education	196	1.94	0.72	Disagree
2	Administrators understand the target of ensuring free, equitable secondary education by 2030	196	2.01	0.68	Disagree
3	Administrators are knowledgeable about the importance of lifelong learning opportunities	196	1.87	0.75	Disagree
4	Administrators are aware of the need to improve teacher training and recruitment under SDG-4	196	1.92	0.81	Disagree
5	Administrators are informed about gender-sensitive and disability-inclusive educational targets	196	1.79	0.77	Disagree
6	Administrators know of the global indicators used to track progress of SDG-4 in schools	196	1.63	0.83	Disagree
	Grand mean score	196	1.86	0.76	Disagree

Source: Fieldwork, 2025

The results in Table 1 show that the level of administrators' awareness of the goals and targets of SDG-4 in public secondary schools is generally low. The grand mean score of 1.86 falls below the criterion mean of 2.50, placing it within the "Disagree" (D) category. This suggests that a significant proportion of administrators lack adequate understanding of key components of SDG-4, including its focus on equitable education, lifelong learning, and inclusive strategies. The standard deviation values, ranging from 0.68 to 0.83, indicate a relatively moderate consensus among respondents, confirming the general perception of insufficient awareness regarding SDG-4 among public secondary school administrators in the study area.

Research Question Two

To what extent has SDG-4 been integrated into school policies and practices in the Calabar Education Zone?

Table 2: Respondents' mean ratings and standard deviation on the extent of integration of SDG-4 into school policies and practices in the Calabar Education Zone (N = 196)

S/N	Integration Indicators	Sample	Mean	S.D.	Decision
1	School policies promote inclusive education for all learners	196	2.06	0.84	Disagree
2	Curriculum review processes consider SDG-4-related targets	196	1.91	0.78	Disagree
3	Professional development programmes align with SDG-4 goals	196	1.83	0.72	Disagree
4	Gender equity and accessibility are reflected in school planning	196	2.12	0.81	Disagree
5	Resource allocation supports SDG-4-related improvements	196	1.76	0.69	Disagree
6	Monitoring and evaluation systems track SDG-4 implementation	196	1.68	0.77	Disagree
	Grand mean score	196	1.89	0.77	Disagree

Source: Fieldwork, 2025

The results in Table 2 indicate that the integration of SDG-4 into school policies and practices in the Calabar Education Zone is generally low. The grand mean score of 1.89 is below the criterion mean of 2.50, aligning with the “Disagree” (D) category. This suggests that most administrators perceive a weak alignment between existing school policies and the targets of SDG-4, particularly in areas such as inclusive planning, curriculum reform, professional development, and tracking mechanisms. The standard deviation values, which range from 0.69 to 0.84, show a moderate level of agreement among respondents, reinforcing the conclusion that SDG-4 integration remains insufficient in the schools under review.

Research Question Three

What challenges do administrators face in implementing SDG-4 in public secondary schools?

Table 3: Respondents' mean ratings and standard deviation on the challenges administrators face in implementing SDG-4 in public secondary schools (N = 196)

S/N	Challenge Indicators	Sample	Mean	S.D.	Decision
1	Inadequate funding and infrastructure hinder SDG-4 implementation	196	3.44	0.66	SA
2	Insufficient training and capacity-building opportunities for staff	196	3.29	0.72	A
3	Poor awareness and understanding of SDG-4 among key stakeholders	196	3.18	0.79	A
4	Lack of effective monitoring and evaluation frameworks	196	3.22	0.74	A
5	Resistance to change within the school system	196	2.94	0.82	A
6	Weak policy support from education authorities	196	3.11	0.77	A
	Grand mean score	196	3.20	0.75	A

Source: Fieldwork, 2025

The results in Table 3 show that administrators face significant challenges in implementing SDG-4 in public secondary schools. The grand mean score of 3.20 falls within the “Agree” (A) category, indicating a high level of agreement among respondents on the prevalence of these obstacles. Notably, issues such as inadequate funding, lack of stakeholder awareness, weak monitoring systems, and insufficient staff training were consistently identified as major barriers. The standard deviation values, ranging from 0.66 to 0.82, suggest a moderate to high level of consensus among respondents, reinforcing the reliability of the findings and highlighting the need for systemic interventions to address these challenges.

Research Question Four

What support mechanisms are available to administrators for the effective implementation of SDG-4 in the study area?

Table 4: Respondents' mean ratings and standard deviation on the support mechanisms available for the effective implementation of SDG-4 (N = 196)

S/N	Support Mechanism Indicators	Sample	Mean	S.D.	Decision
1	Government provides periodic training on SDG-4-related strategies	196	2.14	0.83	D
2	School administrators receive instructional materials aligned with SDG-4	196	2.07	0.79	D
3	Education authorities conduct regular supervision and follow-up	196	2.36	0.81	D
4	Collaboration with NGOs and development partners is encouraged	196	2.21	0.76	D
5	ICT infrastructure is available to support inclusive learning practices	196	1.98	0.85	D
6	Financial support for SDG-4 implementation is provided to schools	196	1.87	0.88	D
	Grand mean score	196	2.11	0.82	D

Source: Fieldwork, 2025

The results in Table 4 reveal that support mechanisms available to administrators for the effective implementation of SDG-4 in the study area are generally inadequate. The grand mean score of 2.11 falls below the benchmark of 2.50, corresponding to the “Disagree” (D) category. This indicates that most respondents believe that critical support structures—such as training, supervision, financial backing, ICT facilities, and partnerships—are either insufficient or inconsistently provided. The standard deviation values, ranging from 0.76 to 0.88, reflect a moderate level of agreement among respondents, emphasizing the need for enhanced institutional and governmental support to enable effective SDG-4 implementation in public secondary schools.

Hypothesis One

There is no significant difference in the perception of male and female administrators towards the implementation of Sustainable Development Goal (4) in Calabar Education Zone.

Table 5: Independent t-test analysis of male and female administrators' perception of SDG-4 implementation

Gender	N	Mean	S.D.	df	t-cal	p-value	Decision
Male	118	3.12	0.74				
Female	78	2.89	0.71	194	2.32	0.021	Reject Ho

Source: Fieldwork, 2025

The result in Table 5 shows that male administrators (N = 118) had a mean perception score of 3.12 (SD = 0.74), while female administrators (N = 78) had a mean score of 2.89 (SD = 0.71) regarding the implementation of SDG-4. The calculated t-value is 2.32 with 194 degrees of freedom, and the p-value is 0.021, which is less than the significance level of 0.05. Since the p-value is less than 0.05, the null hypothesis is rejected. This implies that there is a statistically significant difference in the perception of male and female administrators toward the implementation of Sustainable Development Goal (4) in public secondary schools in the Calabar Education Zone. The result suggests that gender influences how administrators perceive SDG-4 implementation efforts.

Discussion of Findings

The findings from the first research question revealed that the level of administrators' awareness of the goals and targets of Sustainable Development Goal 4 (SDG-4) in public secondary schools in the Calabar Education Zone is generally low. With a grand mean score of 1.86, administrators demonstrated limited knowledge of key components of SDG-4, including equitable access to quality education, inclusive learning environments, and lifelong learning opportunities. This aligns with the empirical observations of Yakubu and Lawal (2023), who found that while most administrators in North Central Nigeria were aware of SDG-4 in general terms, they lacked an in-depth

understanding of its specific targets. The implication is that the effectiveness of SDG-4 implementation is undermined by a knowledge gap at the leadership level, which is essential for policy articulation and execution within schools.

The result of the second research question further underscored the poor integration of SDG-4 into school policies and practices. With a grand mean of 1.89, respondents disagreed that inclusive educational targets, curriculum alignment, and gender-responsive planning were being adequately reflected in institutional frameworks. This finding is consistent with Eze and Agbo (2024), who reported that only a few schools in South-Eastern Nigeria had mainstreamed SDG-4 into their strategic plans, and even then, largely due to NGO involvement. Similarly, Okeke and Afolabi (2022) revealed that school improvement plans in Lagos State often lacked explicit references to SDG-4, indicating that national education policies were not sufficiently localized in school-level operational frameworks. These findings suggest that even where administrators are partially aware of SDG-4, structural and institutional inertia may hinder practical implementation, especially in the absence of explicit guidelines, training, or monitoring systems tailored to SDG-4 targets.

Results from the third research question revealed that administrators face significant challenges in implementing SDG-4. The grand mean of 3.20 indicated strong agreement among respondents that issues such as inadequate funding, lack of capacity-building programmes, weak monitoring systems, and stakeholder resistance were prevalent. These results are corroborated by Mohammed and Tanko (2023), who identified poor funding, shortage of trained personnel, and overcrowded classrooms as key impediments in Kaduna State. Likewise, Opara and Nwachukwu (2021) highlighted systemic challenges in rural Cross River State, including infrastructural decay and irregular teacher training, which directly hinder administrators' capacity to implement inclusive education practices. The identified barriers reflect broader systemic weaknesses in the public education sector, where policy ambitions often exceed available institutional capacity and financial support.

The fourth research question revealed that support mechanisms for SDG-4 implementation are largely insufficient, with a grand mean of 2.11. Respondents reported inadequate training, poor resource provision, limited ICT infrastructure, and weak collaboration with NGOs or governmental agencies. These findings mirror those of Umar and Balogun (2023), who found that support from donor agencies in Borno State was inconsistent and poorly aligned with government strategies, often leading to duplicated or fragmented efforts. However, Edem and Udo (2024) provided a contrasting view in Akwa Ibom State, where continuous professional development programmes organized by the Ministry of Education positively influenced administrators' understanding and engagement with SDG-4. This suggests that institutional support, when structured and consistent, can yield measurable improvements in implementation capacity.

Additionally, the result of the hypothesis test showed a significant gender-based difference in administrators' perception of SDG-4 implementation, with male administrators having a more favorable view than their female counterparts. This supports the findings of Adegoke and Lawani (2022), who emphasized that bureaucratic constraints and limited autonomy often differentially affect male and female administrators, particularly in their ability to introduce innovative programmes or access capacity-building opportunities. Finally, Ajibola and Nwosu (2022) highlighted the role of informal peer networks—such as WhatsApp groups and administrative clusters—as critical platforms for experience sharing and mutual learning among school leaders. Overall, the findings emphasize the need for increased awareness, policy alignment, institutional support, and gender-sensitive capacity building to advance the goals of SDG-4 in the region.

Conclusion

The study concluded that awareness, integration, and support for the implementation of SDG-4 in public secondary schools in the Calabar Education Zone are generally low, while administrators face significant challenges that hinder progress. Additionally, a significant gender difference exists in



administrators' perceptions, indicating the need for targeted capacity-building and inclusive policy support.

Recommendations

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

1. The Ministry of Education should organize regular sensitization workshops and seminars to improve administrators' awareness and understanding of the goals and targets of SDG-4.
2. School governing bodies should integrate SDG-4 principles into school policies, curriculum planning, and administrative practices to ensure alignment with global educational standards.
3. Government and donor agencies should increase financial, infrastructural, and technical support to public secondary schools to address the major challenges hindering SDG-4 implementation.
4. Targeted training and mentorship programmes should be introduced to bridge the gender gap in perception and capacity, ensuring that both male and female administrators are equally equipped to drive SDG-4 implementation.

References

- Adegoke, M. O., & Lawani, T. A. (2022). Administrative autonomy and implementation of inclusive education policies in Osun State public secondary schools. *Nigerian Journal of Educational Leadership and Policy Studies*, 14(1), 45–60.
- Ajibola, T. O., & Nwosu, P. E. (2022). Peer collaboration as a strategy for educational policy implementation among principals in Abuja Municipal Council. *African Journal of Educational Research and Development*, 16(2), 89–102.
- Bello, S. M., & Abubakar, I. A. (2022). Awareness of SDG-4 targets among secondary school administrators in North-Western Nigeria. *International Journal of Educational Policy and Administration*, 10(3), 77–91.
- Burns, J. M. (1978). *Leadership*. Harper & Row.
- Edem, M. A., & Udo, E. J. (2024). Effect of continuous professional development on administrators' engagement with SDG-4 in Akwa Ibom State. *Nigerian Educational Journal of Contemporary Issues*, 18(1), 28–42.
- Eze, C. C., & Agbo, A. C. (2024). Integration of SDG-4 targets in public secondary schools in South-Eastern Nigeria. *Journal of Educational Innovation and Practice*, 22(1), 65–80.
- Mohammed, A. H., & Tanko, B. Y. (2023). Barriers to implementing Sustainable Development Goal 4 in public secondary schools in Kaduna State. *Nigerian Journal of Sustainable Education*, 11(2), 33–50.
- Okeke, R. O., & Afolabi, K. A. (2022). Policy alignment and SDG-4 integration in school improvement plans in Lagos State. *West African Journal of Educational Development*, 14(3), 58–73.
- Onabe, D. B., Uzoigwe, M. C., & Ishaku, K. (2021). Evaluation of implementation of Sustainable Development Goal (SDG) 4 in post COVID-19 pandemic era in public secondary schools in Cross River State, Nigeria. *Education for Today*, 17(1), 190–200. University of Calabar Press.
- Opara, K. E., & Nwachukwu, L. I. (2021). Challenges of SDG-4 implementation in rural secondary schools: A case of Cross River State. *Journal of Educational Research in Developing Areas*, 12(4), 102–117.
- Umar, B. S., & Balogun, F. T. (2023). Donor-supported interventions and the implementation of SDG-4 in Borno State public schools. *Nigerian Journal of Education and Development*, 13(1), 50–64.
- Yakubu, I. A., & Lawal, A. M. (2023). School administrators' awareness of Sustainable Development Goal 4 in North Central Nigeria. *Journal of Contemporary Educational Research*, 20(1), 14–27.