

Evaluating the *GreenHubAfrica*'s Communication Strategies in Inculcating Climate Change Knowledge for Pupils in Jos North Local Government Area, Plateau State

Damar, Jennifer Akor

Institute of Strategic and Development Communication

Nasarawa State University, Keffi

akorjenny@gmail.com, 07065752535

Prof. Imoh, Philip Manda

Department of Language and Linguistics,
Faculty of Arts

Nasarawa State University, Keffi

philipimo@gmail.com, 08132283686

Dr. Daniel, J. Chikada

Institute of Strategic and Development Communication

Nasarawa State University, Keffi

d.j.chikada@gmail.com, 08036214213

Plateau State University Journal of Communication Studies (PLASUJOCS) 2026, Vol. 3(1)

©2026 by the Department of Mass Communication, Plateau State University Bokokos, Nigeria.

<http://journals.plasu.edu.ng/index.php/pjcs>

ABSTRACT

The intensifying climate change crisis requires a transition from traditional teacher-centred approaches to strategic communication that fosters active learner engagement. This study evaluates the effectiveness of the *GreenHubAfrica* Foundation's communication strategies in inculcating climate change knowledge among pupils in selected primary schools in Jos North Local Government Area (LGA), Plateau State, Nigeria. Grounded in the Diffusion of Innovation theory, the research utilises a quantitative design, collecting data through questionnaires. From a total population of 4246, a sample size of 366 respondents was determined using Yamane's formula. Quantitative data were analysed and presented using percentages, tables, and charts. The findings indicate that *GreenHubAfrica*'s communication strategies, including narrative storytelling, hands-on learning, visual and creative expression, outdoor lessons, and inquiry-based approaches such as climate clubs, are producing positive outcomes. Pupils exhibited marked improvements in their understanding of the causes and effects of climate change. Furthermore, behavioural changes were observed, with pupils shifting from indiscriminate refuse disposal to recycling, thereby extending the impact from schools to their households. The study concludes that participatory communication is vital for transforming children from passive recipients of information into active participants in climate action. It is recommended that the Plateau State Universal Basic Education Board (PLSUBEB), in partnership with *GreenHubAfrica* and other NGOs, expand these climate change campaigns to additional schools and rural communities to cultivate an environmentally informed population.

Keywords: *Communication, climate change, climate change literacy, communication strategies, early learners, teachers*

Introduction

Communication serves as a foundational concept in human interaction, social development, and the production of knowledge, functioning as both a process and a product in the construction of identity and systems of governance. Academically, the concept is viewed through diverse lenses: from Choi et al.'s (2024) linear transmission model focusing on media effects, to McQuail and Windahl's (2015) perspective on communication as a purposeful, ideological activity shaped by power and culture. Furthermore, Wood et al. (2024) emphasise an interpretive approach, where communication is an evolving system of "meaning-making" and the co-creation of shared realities. In the context of the 21st-century environmental crisis, communication is imperative for informing and mobilizing action to address atmospheric changes, particularly within early childhood education.

The global climate crisis is primarily driven by anthropogenic activities that increase the emission of greenhouse gases (GHGs), most notably carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). These gases trap thermal radiation, resulting in rising surface temperatures and intensified social and environmental disparities

(Abdelhafez & Abbas, 2024). Within the African continent, Nigeria is particularly susceptible to these shifts due to its fragile economy and heavy reliance on climate-sensitive sectors. Notably, the agricultural sector, which accounts for approximately 24% of the national GDP, remains highly vulnerable to extreme weather events such as floods and droughts (Federal Ministry of Environment, 2021).

In Jos North, Plateau State, despite its historically cooler high-altitude climate, recent data indicates declining rainfall and rising temperatures, increasing the risk of water-borne diseases and displacement for children (Damar & Bwakan, 2024). Despite the urgency, a significant gap persists in how climate change is communicated to younger generations in Nigeria. Traditional "teacher-centered" pedagogical approaches often render scientific data as too abstract or inadvertently induce "climate anxiety" and helplessness (Hickman, 2021). This passivity hinders sustainable behavioural change in a demographic that is statistically the most vulnerable to long-term climatic impacts (UNICEF, 2014).

Addressing this gap, the present study evaluates the 2024 "Clean Our World" (COW) project by *GreenHubAfrica* (a

rapidly expanding Non-Governmental Organisation), focusing on children aged 7 to 14 in Jos North. By shifting from informational models to participatory frameworks involving visual storytelling and peer dialogue, climate communication can move from the periphery of education to the center of civic identity. This research posits that when children are engaged as active stakeholders rather than passive recipients, they emerge as "change agents" capable of influencing sustainable practices within their wider communities.

Objectives of the Study

- i. To evaluate *GreenHubAfrica's* Communication Strategies in inculcating Climate Change knowledge among pupils in the Jos North Local Government Area, Plateau State.
- ii. To determine the level of effectiveness of the various communication strategies used by the *GreenHubAfrica* advocacy in enhancing early learners' knowledge of climate change issues.

Understanding the concept of Climate Change

The World Health Organisation (WHO, 2024) asserts that climate change

significantly compromises human well-being by threatening the essential components of health: clean air, safe drinking water, nutritious food, and adequate shelter. This crisis potentially undermines decades of progress in global health. The United Nations Framework Convention on Climate Change (UNFCCC) reinforces this by identifying climate change as one of the greatest challenges of our time, defined as atmospheric alterations attributed to human activity alongside natural climate variability (UNSD, 2016).

At the center of global discourse are Greenhouse Gases (GHGs), which are deeply embedded in contemporary production and consumption. High atmospheric concentrations of CO₂ reduce the Earth's radiative heat loss, resulting in increased temperatures, humidity, and shifted climate patterns. Chan corroborates that climate change is the defining issue of the 21st century, impacting the air, food, and water essential for survival. Specifically, elevated temperatures increase ozone and pollutant levels, contributing to 1.2 million annual deaths from cardiovascular and respiratory diseases (WHO, 2016). Primary contributors include the burning of fossil fuels, deforestation, industrial processes, and agriculture.

Climate abnormalities continue to be detrimental to the global economy, education, and health through altered rainfall, floods, and droughts. Climate patterns are inherently dynamic, exhibiting variations ranging from daily to decadal scales. Tsebee (2020) emphasises that climate change is inextricably linked to weather variability, a phenomenon that occurs frequently and across periodic and non-periodic intervals.

Climate Change Communication

It is a multidisciplinary field of study and practice focused on how individuals, organisations, and societies exchange information regarding the causes, impacts, and solutions of anthropogenic climate change. While early models viewed it as a simple "information transfer" from scientists to the public, modern scholars define it as a complex, participatory process shaped by cultural values, emotional experiences, and social norms (Yale Program on Climate Change Communication (YPCCC), n.d., Oranga et al., 2023).

Moser (2010) provides the foundational modern definition, stating that it is the process by which information about climate change is produced, disseminated, and received, addressing the "invisibility of causes" and the "distant impacts" of the

crisis. Climate change communication encompasses multiple paradigms, including environmental communication, risk communication, development journalism, advocacy journalism, and communication for social change and development (Evans et al., 2018). Risk communication, according to Lie and Servaes (2015), entails the processes by which government agencies and organisations assess and manage risks and crises, and communicate the nature of the perceived crisis to stakeholders and members of the public. In development communication, with its origins in post-colonial communication, it is argued that it serves as a platform for journalists to evaluate the gap between planned development and actual implementation, with greater emphasis on long-term effects (Aggarwala, 1978).

Advocacy journalism positions journalists as the voice of the voiceless, speaking on behalf of those without powerful spokespeople (Jonawitz, 1975). Here, the interests of the people are represented to address societal imbalances. Communication for Development and Social Change employs a participatory approach, in which local communities are key players and dialogue creators, a practice central to sustainable development.

Environmental journalism is a relatively new sub-discipline within communication sciences that encompasses the strategic analysis of all human-environment interactions (Cox & DePoe, 2015). Environmental journalism shares similarities with Climate change education (CCE), which is a more recent theme than environmental education (EE) and education for sustainable development (ESD) (Rocha et al., 2019). In this study, climate change communication is effectively disseminated through education.

***GreenHubAfrica's* Communication Strategies**

The Clean Our World (COW) IV project, initiated by *GreenHubAfrica*, represents a dynamic communication strategy framework designed to create environmental literacy and behavioural change among primary school pupils in Nigeria. By expanding its reach to 70 schools and approximately 69,500 stakeholders, the project utilises a combination of communication strategies and participatory learning to bridge the gap between climate awareness and agency (*GreenHubAfrica*, 2024). A communication strategy provides a framework for identifying issues, problems, and actions requiring attention, considering potential messages, and developing vehicles to deliver

information (Environmental Protection Agency (EPA), 2024). Aligning with the above, the key communication strategy employed by the organization is the Climate Action Superheroes (CASH) syllabus, where learning is simplified through a narrative format, like storytelling, for easy comprehension of complex climate terms by the children. This approach employs narrative framing to translate complex, abstract scientific phenomena such as global warming and ecological degradation into relatable, age-appropriate content. By simplifying climate change concepts through the CASH framework, the project mitigates "climate anxiety" and replaces it with a sense of empowerment, framing children not as victims of environmental crises but as active protagonists in ecological preservation (*GreenHubAfrica*, 2024).

To ensure that the learning of climate change is engaging and easy to grasp, the organization went beyond just educating the children to also train educators in the schools under study. This enhances classroom participation and a sustained teaching method that allows future replication of the advocacy in other locations. Amplifying the essential place of teachers as the custodians of knowledge. The COW IV project prioritises hands-on engagement through school

gardening and the systematic collection of PET waste. This reflects a transition from passive information dissemination to participatory learning. The establishment of environmental clubs acts as a structural reinforcement of this strategy, institutionalising sustainability within the extra-curricular calendar. Furthermore, the creation of self-sustaining waste management systems serves as a "tangible communication" of the circular economy, allowing pupils to witness the immediate results of their environmental advocacy (*GreenHubAfrica*, 2024).

To achieve effective communication about climate change to early learners, understanding its importance and defining desired end objectives are vital, as they provide purpose and a blueprint for delivering information, raising awareness, encouraging action, promoting communal participation, and reaching consensus. Implementing communication strategies at the foundational stages of communicating climate change to pupils, Plateau State experienced a success rate in increasing climate awareness amongst early learners from 28% to 85% (*GreenHubAfrica*, 2024).

Theoretical Framework

This study is anchored on the theory of Diffusion of Innovation [DOI], which was propounded by communication scholar and sociologist, Rogers (2003). It draws upon rational theories of organisational life adopted from sociology, management, and communication to explain individual adoption decisions or intentions to adopt, which concern well-defined innovations and homogeneous populations (Garcia-Aviles, 2020).

As a collaborative process, it is premised on the gradual diffusion of new ideas, behaviours, knowledge, or technology through a population, rather than on the instantaneous emergence of psychological awareness of an impending action capable of causing good or harm to the individual, others, and the immediate environment. Climate change communication for children occurs through a gradual learning process. They do not merely compel environmental actions; rather, awareness is created and taught to them, emphasising the importance of pro-environmental habits/actions and their significant impact on Earth's health. Communication channels and time factors are critical elements in the adoption of new environmental ideas and behaviours. In

pedagogy and teachers' perceptions of climate change, new approaches are introduced to align with changing environmental structures/weather patterns, and they can be adopted and sustained over extended periods. The innovative teacher training and the provision of teaching resources by the Nigerian National Commission for Colleges of Education suggest integrating climate change communication into classroom instruction and curriculum implementation. These innovative acts educate and empower all to adapt to and mitigate climate change. Innovation depends on learning collaboratively, adaptively, productively, and quickly. Therefore, this theory solidifies *GreenHubAfrica's* form of learning that focuses on critical and creative thinking and capacity-building to help children, teachers, organisations, and the government engage with the information provided, inquire, ask questions to identify gaps, and take appropriate actions to respond to climate change for early learners in the LGA under study.

Research Methodology

This study employed a quantitative research tool. As a design, it can be descriptive, correlational, or quasi-experimental, and it

aims to address research problems through well-defined questions to achieve research objectives. For this study, a descriptive research method was employed to collect data and provide a comprehensive understanding of the research problem, as it generates the views of teachers to assess *GreenHubAfrica Foundation's* communication strategies and how it helped in facilitating climate knowledge in selected primary schools in Jos North LGA, Plateau State, Nigeria.

The study population consists of primary school teachers in Jos North LGA, Plateau State. To determine the study population, the total number of teachers and pupils in the ten (10) schools across the local government where *GreenHubAfrica* implemented the climate change advocacy was summed. According to the Plateau State Universal Education Board (PLSUSEB), the total number of teachers and pupils is collectively 4,246. Defining the study population is a critical component of research design, as it sets the boundaries and scope of the study's findings (Ahmad et al., 2023). To determine the sample size for the population under study, Yamane's Formula was used, yielding an estimated sample size of approximately 366. A research-question-guided closed-ended questionnaire on a 5-point Likert Scale

covering 5 sections of participants' demographics and questions aligned with the research questions/objectives was developed. Adopting this approach provides an implicit understanding of the didactic role of communication strategies in inculcating knowledge about climate change among children in Jos North LGA, Plateau State.

Data Presentation and Analysis

This section presents the analysis and results obtained in response to the research questions and objectives of *GreenHubAfrica's* Communication Strategies in Inculcating Climate Change Knowledge for Pupils in Jos North LGA, Plateau State.

Table 1: Demographic Data for Teachers

Age Bracket	Frequency	Percentage (%)
20-30	51	13.9
31-40	165	45.1
41-50	123	33.6
50 and above	27	7.4
Total	366	100
Gender	Frequency	Percentage (%)
Male	139	37.9
Female	227	62.1
Total	366	100
Educational Background	Frequency	Percentage (%)
NCE	207	56.6
B. ED	108	29.5
M.ED	51	13.9
Total	366	100

Source: Field Survey, 2025

In Table 1 representing teachers, 13.9% of respondents are aged 20-30, 45.1% are aged 31-40, 33.6% are aged 41-50, and 7.4% are aged over 50. By gender, 62.1% of

respondents are women, 37.9% are men, and 0% are other. Among respondents with educational qualifications, 56.6% hold an NCE, 29.5% a B. ED., and 13.9% an M. ED.

Table 2: Demographic Data of Children in the Selected Ten (10) Primary Schools in Jos North

Name of Schools	Gender		Total
	F	M	
Pilot School Lamingo	84	91	175
LEA Du	182	168	350
St Paul's Township	100	100	200
LEA Tudun Wada	497	471	968
LEA Kyan Rikkos	249	254	503
LEA Gwong	110	109	219
Our Lady of Fatima	213	271	484
RCM Giring	220	191	411
Township Primary School	268	287	555
LEA Dong	128	121	249

Source: Plateau State Universal Basic Education Board (PLSUBEB), 2025

Analysis of Table 2

The data in Table 2 comprises a total of 4,114 pupils distributed across ten selected primary schools in Jos North, where *GreenHubAfrica* carried out the climate advocacy in Jos North LGA. LEA Tudun Wada represents the largest population in the study with 968 pupils, covering 23.53% of the total sample. Pilot School Lamingo represents the smallest demographic size

with 175 pupils at a percentage size of 4.25%. The overall gender distribution of the sample is remarkably balanced. Of the 4,114 total participants, 2,051 are female, constituting 49.85%, and 2,063 are male, at 50.15%. This indicates a near-balanced ratio in gender representation in the selected primary schools.

Table 3: Communication Strategies

Category	Frequency	Percentage (%)
Classroom Discussions/Storytelling	74	20.2
Hands-on activities	93	25.4
Practical illustration/Role-playing	41	11.2
Project-based learning	20	5.5
All of the above	138	37.7
Total	324	100

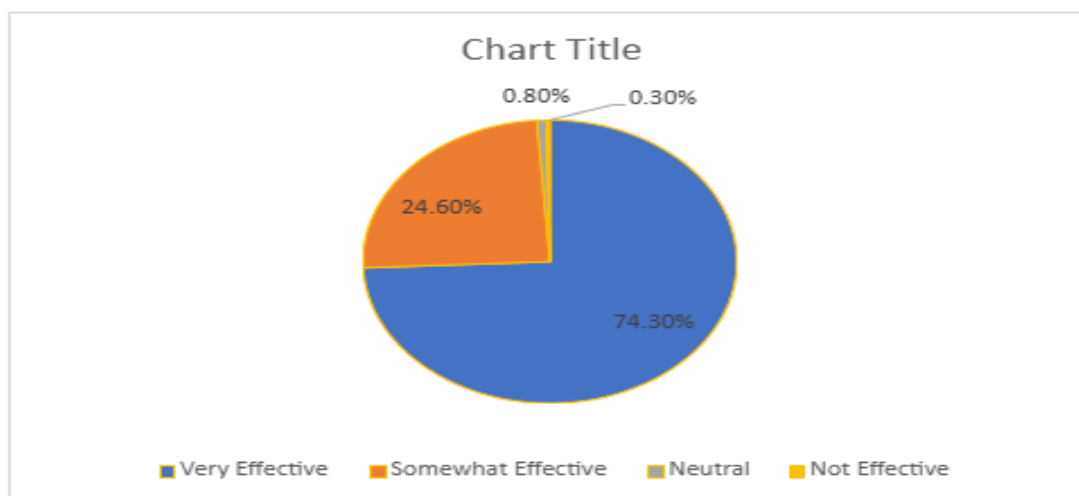
Source: Field Survey, 2025

Analysis of Table 3

Table 3 summarizes the various communication strategies used to teach children about climate change. 74 (20.2%) respondents report using classroom discussions/storytelling. 93 (25.4%) adopt hands-on activities, while 41 (11.2%) adopt practical demonstrations/role-playing.

Additionally, 20 (5.5%) use project-based learning, and 138 (37.7%) use all of the listed approaches. These findings indicate that the majority of respondents consider all of the above communication strategies for enhancing learners' knowledge and engagement.

Chart 1: Effectiveness of Communication Strategies



Source: Field Survey, 2025

Analysis of Chart 1

Chart 1 reveals the effectiveness of the communication strategies adopted by *GreenHubAfrica*. 272 (74.3%) respondents rate the approaches as "Very Effective," while 90 (24.6%) rate them as "Somewhat Effective." Only 3 (0.8%) remain "Neutral," and 1 (0.3%) of the population studied selects the "Not Effective" option. These findings show that the vast majority of respondents (82.5%) view the communication strategies as very effective. This indicates that the approaches *GreenHubAfrica* employed successfully enhanced climate change communication for early learners in the selected primary schools in Jos North LGA, Plateau State.

Discussion of Findings

The data collected through questionnaires showcase the prompt execution of *GreenHubAfrica's* climate change advocacy, which highlights the significant role of communication strategies at a 74.3% level of effectiveness. This emphasises the need to provide children with a space for climate knowledge, as they are among the most vulnerable populations to climate impacts. This aligns with Benevento (2022), who conducted a thematic analysis of

"Communicating Climate Change Risk to Children: A Thematic Analysis of Children's Literature". He emphasised that children are crucial to the future of climate leadership and that, even as youth, they can help achieve climate equity. Further stating that there is a substantial amount of acknowledgement and discourse on the need to communicate to children about climate change and motivate action. This finding also has its roots in the theory of the Diffusion of Innovation, which recognises the essential role of learning new knowledge, approaches, and behavioural patterns. The studies by Tian et al. (2023) on "Children-led environmental communication fosters their own and parents' conservation behaviour" affirm the need to develop effective communication strategies that encourage children-focused climate collective action.

Table 3 presents a breakdown of the communication strategies *GreenHubAfrica* used to communicate climate change to children: classroom illustrations and lessons, hands-on activities, storytelling, and role-playing. An interesting aspect of this finding is that each approach contributed to increased class participation and children's understanding of climate change, illustrating the importance of both formal and informal learning platforms. Kumar et al. (2023)

corroborate the above, stating that declining interest in STEM (Science, Technology, Engineering, and Mathematics) can be rejuvenated through engaging, playful learning tools that foster student interest in STEM subjects. All knowledge communicated to children should be conveyed in simple and clear language, accompanied by interactive activities that illustrate the effects of climate change in ways they can relate to.

From the perspective of the Diffusion of Innovation theory, participatory communication strategies strengthened learners' attitudes toward environmental protection and enhanced perceived attitudinal control. This increased the likelihood of behavioural adoption, which confirms the theoretical positions of this study. These findings directly address the empirical gap identified and prioritise the need for more research on effective climate communication strategies for children in Jos North LGA, Plateau State.

Conclusion

To solve the established problem of the study, which is the traditional education approach that is largely teacher-centered, leaving children as passive recipients of classroom teaching, and the scarce availability of

effective climate change communication for children, especially in public primary schools, data was obtained through questionnaires. The data was categorically analysed, and it was concluded that communication strategies are essential for creating an informed populace, as they engage children in climate change issues in a participatory manner, shifting their status from passive recipients of climate knowledge to active participants in proposing solutions to climate change threats to society. Studies reviewed in this study have endorsed these communication strategies, as they align with core elements of childhood learning and psychological development.

Communication strategies through creative elements such as storytelling, games, songs, hands-on activities, and community mapping, children develop a sense of identity within their community and, through action-based, locally oriented solutions, a sense of responsibility. These build up active climate actions toward environmental sustainability. The study provides geographically specific data, identifying a poor availability of research work on climate change communication for children in Plateau State, Nigeria. This provides a reliable database to inform the development of educational policy

on climate change communication for children.

Recommendations

Based on the findings of this research, the following recommendations were made:

1. For effective climate communication, it is crucial that practical steps that go beyond abstract knowledge, such as understanding the harmful effects of tin mining, cutting down trees, and the disadvantages of burning firewood, be addressed through communication strategies. This gives the child a sense of identification, which provokes action.
2. The adoption of narrative methods in teaching children, especially in rural communities, cannot be downplayed. An infusion of cultural folklore that emphasises the roles of all in nature preservation conveys effective messages about environmental management to children.
3. There is a need for primary schools to shift from a passive approach to climate learning to one that implements hands-on activities and projects that empower them to participate actively. *GreenHubAfrica*, in creating the above shift,

established Climate Change Clubs that foster climate learning and practical, sustainable actions, such as tree planting and school farms. What children see and do boosts active participation in any learning process.

REFERENCES

- Abdelhafez, A., & Abbas, M. (Eds.). (2024). *Climate-smart greenhouses: Innovations and impacts*. IntechOpen.
- Aggarwala, N. K. (1978). *What is development journalism?* Press Institute of India.
- Ahmad, S., Sajjad, S., & Shafi, S. (2023). Assessing the impact of climate change communication on public awareness and behavioural change. *Journal of Environmental Policy and Management*, 15(2), 145-162.
<https://doi.org/10.166/j.jepm.2023.01.004>
- American Psychological Association. (2023, February 17). *Climate change*.
<https://www.apa.org/topics/climate-change>
- Benevento, C. (2022). Communicating climate change risk to children: A thematic analysis of children's literature. *Environmental Health Communication*, 6(2), 145–158.
<https://doi.org/10.1080/21683565.2022.2031147>
- Choi, M., & Song, B. (2024). Organized complexity of the CSA communication strategy. *Corporate Communications: An International Journal*, 29(5), 636–652.
<https://doi.org/10.1108/ccij-07-2023-0101>
- Damar, J., & Bwakan, N. (2024). Interrogating the efficacy of educational interlocation in Enhancing climate change education amongst early learners in selected primary schools in Jos South Local Government Area of Plateau State, Nigeria. *International Journal of Research and Innovation in Social Science (IJRISS)*, 8(5), 1061–1072.
<https://doi.org/10.47772/IJR.2024.805073>
- Environmental Protection Agency. (2024). Communicating climate change: A guide for educators and community leaders. EPA Office for Educators and Community Leaders. EPA Office of Air and Radiation.
<https://www.epa.gov/climate-indicators/communication-resources>

- Evans, H.C., Dyil, L. & Teer-Tomaselli, R. (2018). Communicating climate change: Theories and perspectives. In W. Leal, H. Manolas, A.M. Azul, U.M. Azeiteiro, & H. McGhie (Eds.), *Handbook of climate change communication*. (pp. 107-122). Springer.
- Federal Ministry of Environment, Nigeria. (2021). *National climate change policy for Nigeria (2021–2030)*. Government of Nigeria.
- Hickman, C. (2021). Climate anxiety in children and young people. *The Lancet Planetary Health*, 5(12), e863–e873. [https://doi.org/10.1016/S2542-5196\(21\)00278-3](https://doi.org/10.1016/S2542-5196(21)00278-3)
- Kumar, R., Singh, P., & Sharma, A. (2023). Playful learning tools and student engagement in STEM education. *International Journal of STEM Education*, 10(44), 1–15. <https://doi.org/10.1186/s40594-023-00412-9>
- Lie, R., & Servaes, J. (2015). Discourses on development communication. *Nordicom Review*, 36(2), 21–37.
- McQuail, D., & Windahl, S. (2015). *Communication models for the study of mass communications* (2nd ed.). Routledge.
- Oranga, J., Oranga, M., & Matere, A. (2023). Effective climate change communication: A systematic review based on 25 years of literature. *Communication Research*, 51(4), 367–390
- Tsebee, A. (2020). Mass media and climate change management among farmers in selected local governments in Benue State. *NTA-TVJ Journal of Communication*, 4(1), 287–297. <https://www.ntatvc.org>
- Tian, Q., Chen, H., & Wang, Y. (2023). Child-led environmental communication fosters conservation behaviour. *Journal of Environmental Psychology*, 85, 101929.

<https://doi.org/10.1016/j.jenvp.2022.101929>

UNICEF. (2014). *Unless we act now: The impact of climate change on children*. UNICEF.

United Nations Statistics Division. (2016). *Glossary of climate change terms*. United Nations.

United States Environmental Protection Agency. (2010). *Communicating climate change: A guide for educators*. EPA.

Wood, J. T., & Hains, R. C. (2024). *Communication in our lives* (9th ed.). Cengage Learning.

World Health Organisation. (2024). *Climate change and health*. WHO

Yale Program on Climate Change Communication (YPCCC). (n.d.). *What is climate change communication?*

<https://climatecommunication.yale.edu/about/what-is-climate-change-communication/>