

ASSESSING *GREENHUBAFRICA*'S CLIMATE CHANGE ADVOCACY THROUGH PARTICIPATORY LEARNING AND ACTION IN SELECTED PRIMARY SCHOOLS IN JOS SOUTH LOCAL GOVERNMENT AREA, PLATEAU STATE

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ABSTRACT

Climate trends and their associated impacts continue to pose significant global challenges, necessitating a fundamental transformation in how environmental risks are communicated. Participatory Learning and Action (PLA), an experiential approach emphasising active learner engagement, is critical for disseminating climate knowledge to early learners. This study assesses GreenHubAfrica's climate advocacy through PLA in primary schools in Jos South, Plateau State. PLA enables children's direct participation in knowledge creation and environmental problem-solving. Guided by Participatory Communication Theory, the study employed a mixed-methods design. It used Yamane's formula to determine a sample size of 324 respondents, including teachers, children, and staff of the Plateau State Universal Basic Education Board and GreenHubAfrica. The results indicate that the PLA model effectively shifted pupils and teachers from passive recipients to active participants in climate solutions. Notably, the PLA's participatory approach contributed to increased recycling behaviors and a deeper understanding of climate causality. The study concludes that PLA is an essential communication tool for fostering an informed and engaged populace. It is recommended that the Plateau State Primary Education Board and non-governmental organizations institutionalize this participatory approach to broaden climate change awareness within school communities.

Keywords: Climate change advocacy, climate literacy, early learners, environmental communication, participatory learning, and action

Introduction

Climate change has emerged as the defining issue of the 21st century, fundamentally altering the global discourse on sustainability. At its core, the crisis is driven by the accumulation of Greenhouse Gases (GHGs), particularly high atmospheric concentrations of carbon dioxide, which trap heat radiated from Earth. This process results in increased global temperatures and humidity, significantly disrupting established climate patterns. As noted by the World Health Organization (2016), these shifts affect the very essentials of life, the air we breathe, the food we eat, and the water we drink. Beyond rising temperatures, the crisis manifests as a complex interplay of extreme weather, rising sea levels, biodiversity loss, and socio-political instability (Damar & Bwakan, 2024).

While climate change is a global phenomenon, demographic pressures and environmental degradation have rendered the African continent uniquely vulnerable. In 2022 alone, Africa accounted for nearly 60% of the global population affected by disasters, with drought impacting 88.9 million individuals across six nations, including Nigeria (WHO, 2024). In Nigeria, the severity of this crisis was underscored by devastating floods that resulted in 603 fatalities and economic losses totaling \$US4.2\$ billion (CRED, 2022). These escalating disasters pose significant risks to national security, health, and agriculture, necessitating urgent resilience measures as outlined in the COP28 commitments (2023).

To address these threats, the role of communication has shifted from mere general awareness to strategic climate advocacy. Communication is the "connective tissue" of human interaction; in a development context, it is not a top-down delivery of instructions but a participatory dialogue that empowers individuals to understand their environment and make informed decisions. Climate change communication serves as a specialized field that bridges the gap between scientific complexity and public understanding. However, traditional "linear" models often fail to influence long-term behavioral change because they treat the audience as passive recipients of information.

This need for a communicative shift is most pressing for children, who face disproportionate risks to their health and development in a warming world (Center on the Developing Child, 2025). Children are not "empty vessels" to be filled with facts; they are capable social actors who interpret global phenomena through the lens of their lived experiences. Consequently, the field of development communication has moved toward Participatory Learning and Action (PLA).

PLA is a qualitative methodology that facilitates in-depth understanding through the full and active participation of community members (INTRAC, 2017). When applied to environmental education, PLA breaks the "culture of silence" by allowing children to map, visualize, and address challenges within their immediate surroundings. According to UNESCO (2023), such action-oriented solutions foster hope and collective agency, transitioning learners from a state of climate anxiety to active stewardship.

Despite the clear benefits of participatory models, a substantial gap persists between climate knowledge acquisition and practical implementation among primary school pupils. Without inclusive strategies, children remain disengaged from the problem-solving process. This study focuses on children aged 7 to 14 in selected public primary schools in the Jos South Local Government Area of Plateau State. It assesses how *GreenHubAfrica's* adoption of the PLA framework can transform pupils from passive observers into active participants in climate change mitigation and sustainable waste management. By assessing this localised application, the research

seeks to demonstrate PLA's efficacy as both a pedagogical method and a critical tool for empowering the next generation of environmental leaders.

Research Questions

This research question guides this study:

- i. Which Participatory Learning and Action tools are effective for improving climate change communication in primary schools to enhance early learners' comprehension and proactive engagement?

Aim and Objectives of the Study

The study aims to assess *GreenHubAfrica*'s climate change advocacy through Participatory Learning and Action in Selected Primary Schools in Jos South Local Government Area, Plateau State. The study is guided by this objective, which is to:

- i. Identify effective participatory learning and action [PLA] tools for improving climate change communication in primary schools to enhance early learners' comprehension and proactive engagement.

Climate Change Communication (CCC)

Climate change communication is a critical tool for helping early learners understand what climate change entails. It aims to develop an understanding of how values and behaviors can advance climate action, mitigation and adaptation (UNESCO, 2023). Climate change communication encompasses understanding climate change, adaptation to it, and mitigation, all of which are supported by the spheres of reflection and engagement (UNESCO, 2019). Here, it aims to improve knowledge, enhance education, raise awareness, and increase human and institutional capacities, all to reduce the impact of disadvantages and provide early warnings.

Climate change communication is fundamentally about educating, informing, and mobilizing audiences to solve the climate crisis. At its core, it is the exchange of information, values, and worldviews that bridges the gap between scientific understanding and public action (Yale Program on Climate Change Communication, 2026). This highlights that CCC is not a one-way approach but a dynamic teaching system that enables active participation from one's own perspective and cultural dimensions. It further bridges gaps created by a lack of appropriate information, shifts passive learning toward social engagement and follow-up actions, and changes behavioral patterns within children and teachers.

Participatory Learning and Action [PLA]

PLA is an umbrella term for a "family of approaches and methods" that enable people (including children) to share, analyse, and enhance their knowledge of life and conditions, and to plan, act, monitor, and reflect (Chambers, 2008). Unlike the traditional "top-down" education model, in which the teacher holds all the knowledge, PLA emphasizes "handing over the stick" (Thomas, 2024). Here, the children have ownership of their learning. Thomas further states that a hallmark of PLA is the visual use of tools such as mappings, seasonal calendars, and transect walks. that bypasses literacy barriers, making it ideal for primary school children (2024).

As a relatively new concept in development communication, it is an approach that encompasses learning and community engagement to identify and evaluate problems and drive development. According to Bwakan (2024), PLA is an ever-growing toolkit of participatory and visual methods, including natural interviewing techniques, for identifying needs, planning, monitoring, and evaluating community projects. For Gosling and Edwards, PLA's primary purpose is to support people within communities in analyzing their own situations, rather than having others analyze them, and to ensure that any learning is translated into action (2003). PLA provides a platform that enables children to engage in activities that directly benefit the

environment. These activities can include planting trees, school farming, waste management, and recycling, positioning them as intentional actors rather than passive observers.

GreenHubAfrica's Participatory Learning and Action for Climate Change Communication

GreenHubAfrica is a non-governmental organization dedicated to advancing environmental sustainability through strategic communication, education, and advocacy. The organization utilizes diverse media platforms to facilitate climate change discourse, mitigation efforts, and community action. Aimed at fostering institutional growth and societal development, the organization designs, adapts, and disseminates programs intended to enhance the understanding of localized environmental issues. These initiatives seek to equip participants especially children and teachers with the communicative competencies necessary to facilitate informed and responsible decision-making.

Within this framework, the *Clean Our World (COW)* project, implemented in the Jos South Local Government Area (LGA), utilised Participatory Learning and Action (PLA) to engage school children. The intervention focused on practical applications in waste management, recycling, sanitation, and food security. By employing pedagogical tools such as storytelling and role-plays, the project translated complex climate concepts into accessible formats, thereby enabling active participation and cognitive engagement among students. This aligns with the findings of Klement et al. (2025), who report that although many children “know” about activities that bring about positive change in their local school environments, they often lack the agency or practical tools to translate this theoretical understanding into sustained individual and collective climate action. This significantly drives climate action, fostering environmental and behavioral change.

Thomas (2024) supports the above, noting that the use of visual tools in PLA is particularly well-suited to primary school children, as they are more likely to participate. When children are involved in participatory research, their feelings of “eco-anxiety” decrease. By engaging in collective analysis with their peers, individuals confront the abstract threat of climate change as a shared, solvable community challenge (Murzyn et al., 2025). The COW project also empowered teachers with interactive tools and instructional materials to meaningfully engage their pupils in climate action, a tenet of participatory learning and action (*GreenHubAfrica*, 2025).

Theoretical Framework (Participatory Communication Theory)

Participatory Communication Theory is rooted in the work of Paulo Freire (1970). It shifts the focus from information dissemination to participatory sharing. Freire argued against the “banking model” of education, in which teachers deposit facts into students. Instead, he proposed a dialogic communication model that supports alignment between the teacher and the child's learning. According to Anaeto et al. (2008), this theory seeks to replace modernization theory, particularly its emphasis on knowledge diffusion and technology transfer. Participatory Communication Theory as a framework, challenges top-down transmission-based models of communication and promotes dialogue, empowerment, inclusion, and co-creation of meaning; aligning with Participatory Learning and Action (PLA), methods that enable learners to engage in environmental problem-solving actively. This finding perfectly corroborates Participatory Communication Theory, which emphasizes empowerment, dialogue, and collective learning. Here, PLA operationalizes the theory of participatory communication in this study as it embodies dialogic classroom engagement, establishes child-centered storytelling and reflective exercises, creates room for collective problem identification and solution mapping, and promotes shared meaning-making about environmental challenges. This study provides empirical validation of Participatory Communication Theory within early childhood education — an area underexplored

in Nigerian climate communication research. By advocating for the application of participatory principles at the foundational stage of learning, the study demonstrates that empowerment can begin in early childhood, challenging the assumption that children lack the cognitive maturity to engage meaningfully with environmental discourse. When this theory is applied to climate change communication for children, they are informed about climate change, asked for their views, collaborate with teachers on a predefined goal, identify problems using PLA tools, and lead the solution (World Bank, 2009). Here, the children see themselves as authors of their own story (ownership prompts effective action).

Furthermore, the data obtained suggest that these inclusive methods promote shared meaning-making about environmental challenges, aligning with the argument by Anaeto et al. (2008) that participatory frameworks must replace top-down, transmission-based models. By demonstrating that 174 respondents (54%) recognize the significance of these combined techniques, this study identifies the underutilisation of PLA as an efficient learning tool for children.

Methodology

This study utilized a Participatory Learning and Action (PLA) framework, moving beyond traditional data collection to engage participants as active partners in knowledge generation. Rather than treating early learners and teachers as passive data sources, the research design prioritized interactive inquiry to understand *GreenHubAfrica's* adoption of PLA for effective climate change communication in Jos South LGA, Plateau State. Adopting a mixed-methods approach provides a versatile design for addressing complex problems through focused inquiry. By blending descriptive insights with qualitative depth, the study sought to provide a holistic view of how *GreenHubAfrica's* advocacy reshaped climate literacy in Jos South, Plateau State. To capture the authentic experiences of those on the ground, the research employed questionnaires, in-depth interviews (IDI), and Focus Group Discussions (FGD), enabling teachers and pupils to share their personal perspectives on these PLA methods. The study involved a diverse community comprising primary school children, educators, administrators, and representatives of both *GreenHubAfrica* and the Plateau State Universal Basic Education Board (PLSUBEB). To establish a clear scope, we focused on five (5) schools where the climate advocacy was active. Data from PLSUBEB confirmed a total population of 1,741 participants, comprising children, teachers, and staff of *GreenHubAfrica* and PLSUBEB. Applying Yamane's Formula to the total population resulted in a sample size of 324 respondents. Data collection was guided by three tools: a 5-point Likert-scale questionnaire to assess demographics and attitudes, FGDs, and interviews. The final sample was organized into three distinct groups: 296 teachers for the survey, 21 children for focus group discussions, and 7 key officials for in-depth interviews. This layered strategy provides a deep, human-centered understanding of how PLA actually works to communicate climate change to early learners.

Data Presentation and Analysis

This section presents the analysis and results in response to the research question and objective of *GreenHubAfrica's* climate advocacy through participatory learning and action in Jos South primary schools in Plateau State.

Table 1: Demographic Data for Teachers

Age Bracket	Frequency	Percentage (%)
20-30	40	12.3
31-40	150	46.3
41-50	112	34.6
50 and above	22	6.8
Total	324	100
Gender	Frequency	Percentage (%)
Male	137	42.3
Female	187	57.7
Others	0	0
Total	324	100
Educational Background	Frequency	Percentage (%)
NCE	185	57.1
B. ED	96	29.6
M.ED	43	13.3
Total	324	100

Source: Field Survey, 2025

In Table 1, 12.3% of respondents are aged 20-30, 46.3% are aged 31-40, 34.6% are aged 41-50, and 6.8% are aged over 50. By gender, 57.7% of respondents are women, 42.3% are men, and 0% are other. Among respondents with educational qualifications, 57.1% hold an NCE, 29.6% a B. ED., and 13.3% an M. ED. This female-led demographic aligns with broader educational trends in primary education and offers a diverse perspective on how climate change advocacy is delivered in the classroom. The demographic data present a respondent profile characterized by professional growth (majority aged 31-50), a strong female presence, and a robust educational foundation in pedagogy. This data ensures that the implementation of the *Clean Our World* (COW) project is supported by a population capable of effectively facilitating hands-on activities, storytelling, and role-plays.

Table 2: Demographic Data for Children in the Selected Five Primary Schools in Jos South

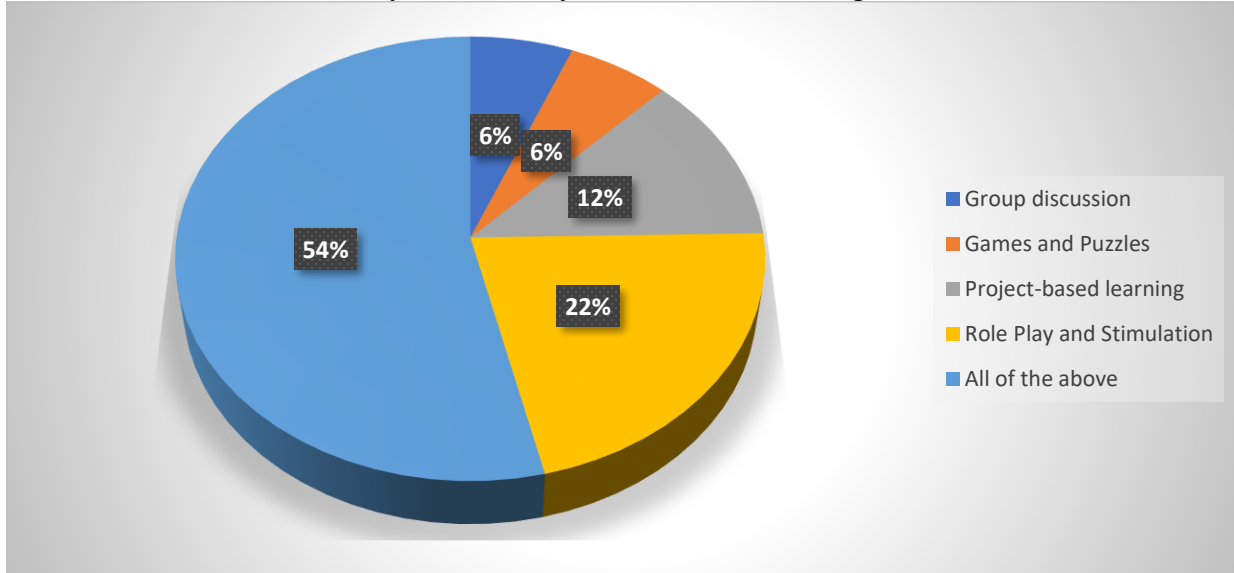
Name of Schools	Gender		Total
	F	M	
Obasanjo Model A	106	117	324
Obasanjo Model B	179	163	342
Obasanjo Model C	211	195	406
Obasanjo Model Shere	205	173	378
LEA Kufang	206	158	364

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

Table 2 represents an analysis of the number of schools and gender summation with a total sample size of 1,713 pupils. The distribution of participants varies across the five schools, with Obasanjo Model C having the largest number, 406 primary school pupils. This is followed by Obasanjo Model Shere (378) and LEA Kufang (364). Obasanjo Model A and Obasanjo Model B comprise the smaller subsets of the study population, with sizes of 324 and 342, respectively. Gender variables indicate a moderate female-to-male disparity across the selected schools. Female pupils are 907, representing 53% of the total population, while male students are 806, constituting 47%. The sample size drawn from the five primary schools provides a comprehensive basis for assessing

the impact of the *Clean Our World (COW)* project. It ensures that the research findings reflect a broad demographic profile across Jos South.

Chart 1: PLA methods used by *GreenHubAfrica* for Climate Change Communication for Children



Source: Field Survey, 2025

The data on pie chart 1 above on PLA methods employed by *GreenHubAfrica* to communicate climate change in the classroom for early learners reveals that 20 representing 6.2% of the study population pick group discussion as a method used to aid climate learning, 20 covering 6.2% of the respondents pick games and puzzles, 40 constituting 12.4% of the respondents select project-based learning, 70 covering 22% of the respondents pick role-play and simulations, and 174 representing 54% choose all of the above. The result indicates that 54% of respondents (the majority) selected all methods, suggesting that each technique is significant for communicating climate change to children in primary schools in Jos South LGA, Plateau State.

Table 3: Participatory Learning and Action Impact on Climate Change Communication for Children

Category	Frequency	Percentage
Aids critical thinking and problem-solving initiatives	38	11.7
Encourages participation and classroom engagement	33	10.2
Assists in developing practical learning skills	36	11.1
Elevates cooperation and a spirit of communal learning	66	20.4
All of the above	151	46.6
Total	324	100

Source: Field Survey, 2025

Table 3 reveals how participatory learning and action (PLA) enhances climate change communication for children. 38 representing 11.7% of the respondents affirm that it aids critical thinking and problem-solving initiatives; 33 constituting 10.2% state that PLA encourages participation and classroom engagement; 36 covering 11.1% of the respondents opine that PLA assists in the development of practical learning skills; 66 representing 20.4% acknowledge that it elevates cooperation and a spirit of communal learning; and 151 representing 46.6% of the respondents acknowledge that PLA greatly enhances all of the listed categories in the selected primary schools in Jos South LGA, Plateau State.

Discussion of Findings

The data collected on PLA methods employed by *GreenHubAfrica* to communicate climate change in the classroom for early learners reveals that 20 respondents (6.2% of the study population) identify group discussion as a method used to aid climate learning, 20 (6.2%) select games and puzzles, 40 (12.4%) choose project-based learning, and 70 (22%) pick role-play and simulations. Notably, 174 respondents, representing the majority at 54%, chose "all of the above." This result indicates that each technique is significant for communicating climate change to children in primary schools in Jos South LGA, Plateau State.

Data obtained through the administration of questionnaires, focus group discussions (FGDs), and in-depth interviews (IDIs) further indicate an improved understanding of climate change among respondents. These findings reveal that Participatory Learning and Action (PLA) had a significant impact on children's climate change communication by moving away from "top-down" information dissemination. Instead, it created a dialogic platform that extended beyond mere information, fostering active engagement in which children ask questions, construct meaning, and draw on their personal knowledge.

PLA, which aligns with the theory of participatory communication, applauds learning methods that prioritize empowerment and engagement over passive reception. By using storytelling, games, transect walks, songs, and pictures to describe small-scale actions such as improper waste disposal, flooding, erosion in farmland, increased rainfall, and heat, the process connects global issues to the local realities they know. This alignment promotes climate action by validating the child's own observations as a legitimate source of knowledge (IDI, 2025). Reid et al. (2009) support this, asserting that through a participatory approach using theatre, poems, and songs, children become a powerful medium for transmitting climate knowledge and building a resilient climate community. Practical application of these tools was evident during an FGD session in Jos South, where participants discussed a story that taught them how to be climate actors in their homes, schools, churches, and other settings. This highlights the "horizontal" flow of information, where facilitators used images to help participants visualize the ozone system and the effects of climate change on the environment (FGD, 2025). The hands-on activities deepened their understanding of climate lessons and the importance of recycling, moving the pedagogical focus from theory to practice.

Participants reported being taught to reflect on their observations and take appropriate action rather than feel helpless (FGD, 2025). This reflects the core of participatory theory: the transition from passive victims to active contributors to change. By integrating learning with action, PLA helps children become informed citizens who can effectively advocate for their environment (IDI, 2025). As Beaver and Borgerding (2023) suggest, climate change communication must move beyond disaster narratives and focus on collective efficacy, showing how community actions can mitigate local risks. Explaining these new ideas, knowledge, and environmental behaviors fostered by PLA highlights the collaborative and complementary connections that empower the next generation.

Conclusion

The primary goal of the study was to assess the impact of *GreenHubAfrica*'s climate change communication advocacy, using participatory learning and action (PLA), on children, teachers, and the schools benefiting from it. The data on PLA methods reveals that the majority of respondents (54%) selected all of the above, indicating that techniques such as group discussion, games and puzzles, project-based learning, role-play, and simulations are collectively significant for communicating climate change to children in primary schools in Jos South LGA, Plateau State.

These findings demonstrate that Participatory Learning and Action (PLA) had a significant impact on children's climate change communication by moving away from "top-down" information dissemination and creating a platform for active engagement. The study also establishes that PLA is an effective medium for communicating about climate change to children, as it extends beyond the traditional approach of simply providing information. Children are engaged in learning, interrogating cognitive processes through hands-on activities. These processes create an interconnection with their immediate environment and foster skill development and actionable behaviors, as PLA is an action-focused medium. *GreenHubAfrica* adopted PLA primarily to build climate change actors in Jos South LGA of Plateau State, using games, projects, and transect walks, as well as hands-on activities like material recycling, which help their artistic expression. PLA was used to shift learning from a top-down approach to a participatory and empowering one, particularly for children, highlighting the significant place of participatory communication theory. By integrating learning with action and focusing on collective efficacy, PLA empowers children to transition from passive victims to informed citizens and active contributors to change, fostering environmentally responsible behaviors.

The study gives an in-depth assessment of PLA as an effective communication model in environmental education of children. Creating a template for academic engagement on how best to boost children's participation in STEM subjects, and an efficient dynamism in learning. It makes significant theoretical, empirical, and practical contributions to climate change communication scholarship. Theoretically, the study confirms the applicability of the Theory of Participatory Communication in explaining climate change communication outcomes using PLA among early learners in developing country contexts. Empirically, the study fills the gap identified by providing evidence on the effectiveness of PLA adoption in climate advocacies in Nigerian primary schools. Practically, the study demonstrates that PLA is highly effective in improving climate awareness and behavioral readiness among early learners.

Recommendations

- i. The concept of participatory communication should be adopted at different levels of learning for children because of its advantages in empowering learners and promoting learning sustainability.
- ii. An increased optimization of visual aids should be utilized more, as children readily identify with pictures and other engaging media content. Storybooks on climate issues, accompanied by exaggerated images, can raise awareness of climate change. Where a child cannot understand the words, they communicate by relating images.
- iii. Development of a localised curriculum for primary education that is relevant. PLSUBEB can collaborate with other NGOs, such as *GreenHubAfrica*, to develop a climate-inclusive learning template for primary school systems. This provides a robust foundation for other areas of learning.
- iv. Trainings for teachers, learning kits, including simple-to-understand lesson plans, visual aids, and teaching resources on climate change, should be gradually made available to enhance teachers' knowledge and increase classroom participation.

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