

LIBRARIANS AS CLIMATE EDUCATORS: DOCUMENTARY EVIDENCE AND NARRATIVES FROM PRACTITIONERS IN SOUTH-EAST, NIGERIA

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Abstract

This study investigates the role of library professionals in South-East Nigeria as climate educators and providers of climate-related information services. It explores how institutional type, years of service, and policy frameworks influence their effectiveness. Grounded in Social Learning and Socio-Cultural Learning theories, the research adopts a mixed-methods design. A total of 350 librarians were randomly selected and surveyed using validated Likert-scale questionnaires, complemented by semi-structured interviews and analysis of regional climate policy documents. Quantitative data were analyzed through ANOVA, regression, and descriptive statistics, while qualitative insights were thematically examined. Reliability was confirmed with Cronbach's alpha above 0.80. Findings reveal that librarians' engagement in climate education (mean = 3.43, SD = 0.62) and climate information services (mean = 3.36, SD = 0.65) is moderate. Significant differences emerged across institutional types ($F = 5.21, p < 0.01$) and professional experience levels ($F = 4.38, p < 0.01$), indicating that the field is still evolving. Policy exposure and strength showed positive correlations ($F = 12.21, p < 0.01$), underscoring the moderate impact of policy integration on climate education roles. The study aligns with global scholarship emphasizing the need to internalize librarians' contributions to climate education, strengthen policy frameworks, and provide structured training and resources.

By combining practitioner perspectives with policy analysis, it highlights librarians as vital yet under-recognized actors in fostering eco-literacy and resilience. Importantly, it fills a gap in African scholarship, positioning Nigerian librarians as key facilitators of climate awareness and sustainable community engagement.

Keywords: Climate education; Librarianship; Policy frameworks; Eco-literacy; Nigeria; Mixed-methods research

Introduction

The effects of climate change are being observed around the world and are particularly evident in vulnerable areas such as South - East Nigeria. Flooding, coupled with disruptions in agriculture, has been exacerbating the socio-economic vulnerabilities in the region, and creating an undermining of the socio-economic bases of the region and the government's ability to respond to the socio-economic crises. These crises are being coupled with rising temperatures (Anabaraonye et al, 2024; UNICEF, 2025). Despite having policy recommendations, the lack of climate literacy remains an obstacle for citizens in Nigeria; more than 60% of Nigerians have been reported to have no knowledge of climate change and as such, are unable to participate actively and meaningfully in adaptive recommendations (Bow Seat, 2025; NiMet, 2024). This gap has serious repercussions for communities, individuals, and companies. This lack of knowledge relates to the deficits in climate change education and the fact that these areas are in the climate-related vulnerable zones (Hamad et al, 2023; Redman, 2022).

The intersection between librarianship and climate change education can best be understood by Social Learning Theory and the Diffusion of Innovations Theory, specifically

the role of trusted boundary spanners in knowledge brokering and changing group behavior. Knowledge is a powerful resource, and because of this, librarians are often seen as the keepers of knowledge and are therefore able to convert complex climate change policy documents to more simple and in layman terms, which will, in turn, raise the level of awareness and the level of action toward the policy (Hamad et al, 2023; Redman, 2022). It has been recognized that libraries are often community-based sustainability resource centers; however, few studies have focused on climate change (Redman, 2022; Anabaraonye et al, 2024).

The library's role in climate communication has been documented in literature on the world over, with a few cross-country studies documenting a range of contributions and highlighting a few studies in the developing world (Redman, 2022; Hamad et al., 2023). While innovative programming has been reported in the developed world, studies in Nigeria remain scattered, with a focus on symptom interventions and little attention to the policy-practice gaps (Anabaraonye et al., 2024; UNICEF, 2025). These gaps demonstrate the urgency for further studies on the role of the librarian in translating policies to the communities.

The debates remain largely unresolved on the role and the extent to which librarians should be included in climate education. There is a gap in the literature as the existing studies remain largely unsubstantiated with the local policies and the lived experiences of practitioners, especially in Nigeria, and the role of librarians in promoting

climate literacy remains to be developed (Anabaraonye et al., 2024; Nwafor-Orizu & Okonkwo, 2025). By integrating policy analysis and practitioner stories, this study fills the gaps and provides a dual contribution to the theory and practice.

In South-East Nigeria, the indices of Climate Vulnerability places Nigeria among the top ten most vulnerable countries, while the country still records low climate literacy (Bow Seat, 2025, NiMet, 2024). Unlike contexts whereby librarians are integrated within embedded in sustainability initiatives, Nigerian librarians are operating under resource and policy constraints. This study gives grounded narratives of the librarians within regional policy frameworks, and provides insights for aligning grassroots and education targets of climate education to goals at the global and national level.

Despite the increase in climate phenomenon, the gap in climate literacy remains, and this contributes to a lack of climate-adapted phenomena in the mitigation. In Nigeria, and in other similar contexts, the community climate information is lacking. The gap in accessible community climate information has resulted in a lack of understanding and has resulted to poor community climate, which undermines resilience to the climate (Aytac, 2022; Kornfeind, 2022). In the absence of structured, formal educational community institutions, there is a gap in understanding the policies, which also undermines sustainable development and environmental justice (Donaldson, 2024; Kornfeind, 2022).

Although regional bodies and governments have implemented climate change educational initiatives and policies, these initiatives tend to be top-down and ignore grassroots movements and advocacy as well as more trusted knowledge brokers like librarians. Existing climate change educational policies and initiatives are poorly coordinated, lack sufficient funding, are overly complex, and leave citizens feeling alienated (Aytac, 2022; Donaldson, 2024). On the other hand, Donaldson (2024) and Kornfeind (2022) argue that librarians have the necessary skills and knowledge as educators and facilitators to promote eco-literacy, but these skills are often underappreciated within climate education.

Although advocacy for the role of libraries as facilitators of sustainability has recently emerged, there have not been many comprehensive studies focusing on librarians' stories or integrating them with regional policy frameworks. This has led to a lack of understanding about the role that librarians can play in integrating policy and practice within climate education. This study titled, **Librarians as Climate Educators: Narratives from Practitioners and Evidence from Regional Policy Documents,** attempts to fill this gap.

Research Questions

1. What is the degree to which climate education and climate-related information services are provided by librarians in South-East Nigeria.
2. What is the extent to which librarians' climate education initiatives differ by institutional affiliation and the level of professional experience in South-East Nigeria.

3. What is the extent to which the differences in regional and institutional climate policy frameworks affect librarians' roles as climate educators.

Literature Review

Aytac (2022) is the first to propose the role of libraries as promoters of climate literacy within the discipline of information science. Climate literacy is the capability to obtain and utilize environmental data in order to facilitate decision-making, a process for which librarians are integral (Aytac, 2022; Anabaraonye et al., 2024). Conceptual definitions in the literature reflect the thinking that librarians occupy a unique position in the interface between policy and the community, where they provide and interpret sophisticated climate information (Okoro et al., 2023; Kornfeind, 2022). While some researchers emphasize the role of librarians to the provision of information, others stress the importance of this role in transforming eco-literacy and sustainability (Donaldson, 2024; Hamad et al., 2023).

The various forms, such as community-based outreach, public librarianship, and academic librarianship, articulate distinct pathways of climate education. These avenues encompass the creation of awareness, advocacy, and the infusion of climate themes within curricula and community engagements (Okoro et al., 2023; Donaldson, 2024). Although policies like Nigeria's National Climate Change Policy (2021–2030) spotlight the importance of education at the grassroots level, the role of librarians in the implementation of such policies has been largely ignored (Federal Ministry of Environment, 2021). Among the various suggested methods are climate literacy surveys, library program content

analyses, and assessment of the congruence of library activities and policies (Orewa, 2024; Onwubiko, 2025).

Social Learning Theory states that individuals learn by observing and interacting with others. Libraries serve as spaces for social learning, enabling communities to gain and share knowledge about the climate by facilitating workshops, running exhibitions, and promoting discussion (Wheatona et al., 2024; Anabaraonye et al., 2024). Socio-cultural Learning Theory builds upon this by conceptualizing learning as a process situated within a given culture and social and institutional structures. It emphasizes the need to integrate climate education with the community's cultural systems, social structures, and prevailing norms and practices (Ardoin et al., 2024; Aytac, 2022). For South-East Nigeria, this implies that librarians need to integrate climate stories with local knowledge systems and the prevailing policies of the region.

Studies that consider librarians as potential climate educators show both promise and challenges. Anabaraonye et al. (2024) examined librarians and environmental educators' perceptions of the role of libraries in fostering climate literacy in Nigeria. They found that libraries are beginning to be recognized as sites for fostering climate literacy, but ineffective library advocacy and the absence of supportive policies remain challenges. Likewise, Okoro et al. (2023) analyzed engagements of rural librarians and farmers through focus group discussions and outreach. They reported that rural librarians' advocacy helped farmers to better understand the climate-related challenges of farming.

Obim (2025) gave an analysis of the potential of children as proactive advocates for the environment. The belief that awareness at a young age will create an enduring commitment is the basis of this initiative that aimed to develop a climate literacy of 51 children through active methods, including, participatory observation, interviews, and joint actions with community and other stakeholders. The study revealed that the majority of climate problems stem from human behavior, particularly the incineration of refuse, and that children should be taught to adopt recycling and reusing, and planting trees as practices to help solve climate problems. The slogan of the campaign, "Green Everywhere," was a slogan that was a pedagogical and practical model to help communities become more sustainable.

Orewa (2024) analyzed perceptions of climate action among 184 librarians in Nigerian universities using a quantitative approach. Findings suggested that librarians, though they recognized their potential role in climate education, did not partner with climate advocacy groups, and the advocacy of climate education remained an institutional barrier. Onwubiko (2024), using a case study approach, examined the green library initiatives in federal universities. Findings showed that libraries were beginning to adopt green practices, such as having eco-friendly buildings, but offered climate education.

Redman (2022) surveyed library engagement in climate communication across various countries. In developed contexts, libraries showed advancement and innovation in climate communication programming, whereas developing countries exhibited little

penetration. In the Middle East, Hamad and colleagues (2023) identified and explained the situation in academic libraries. They argued that while libraries could improve climate literacy, it required supportive policies from the government. These findings are in consonance with Kornfeind (2022) who chronicled the advocacy efforts on libraries worldwide but cited unequal funding as a reason for advocacy efforts to be unsuccessful.

All the studies analyzed highlight that while librarians are climate educators, their potential is undisputed, but policy gaps, inadequate funding, and programming silos, result in underutilized, or unutilized contributions. The empirical evidence from South-East Nigeria highlights the need to firmly position librarians within climate education, given the region's flooding and agricultural disruption. This study is filling the gap created by the combination of the narratives from practitioners and the analysis of policy documents to gain a comprehensive understanding of the potential roles of librarians in the promotion of climate literacy within the given and national policy context.

Methodology

The study utilized a mixed-methods approach incorporating surveys and document analysis. This approach enables the capturing of quantitative and qualitative dimensions of the librarians' roles in climate education. The study's population involved academic, public, and special librarians in South-East Nigeria, totaling 3,500 professional librarians. The population was derived from the Region's large number of higher education institutions

and public libraries, which are the main access points for the dissemination of climate-related information.

The study made use of stratified random sampling representing the different types of institutions and the different states within South-East Nigeria. The sample was divided into sections to reflect all types of institutions. Sample size was determined based upon Krejcie and Morgan's guidelines for sample size determination. A questionnaire and a semi-structured interview guide were prepared as the research instruments. The descriptive statistics were used to analyze and code the survey responses and establish the extent of the role of climate education undertaken by the librarians. The other role of climate education undertaken by the librarians was analyzed using inferential statistics, while ANOVA was used to further determine the role of climate education conducted by the librarians of varying institutional types and levels of professional experience.

Results and Discussions

Table 1: Demographic Profile of Respondents

Variable	Category	Frequency	Percentage
State of practice	Abia	60	17.1%
	Anambra	70	20.0%
	Ebonyi	50	14.3%
	Enugu	90	25.7%
	Imo	80	22.9%
Institutional type	University	160	45.7%
	Polytechnic	70	20.0%
	College of Education	60	17.1%
	Public/State Library	50	14.3%
	Special Library	10	2.9%
Professional role	Reference/Info Services	120	34.3%
	Instruction/Info Literacy	80	22.9%
	Collection Development	50	14.3%

	Outreach/Community Engagement	60	17.1%
	Digital/Systems	20	5.7%
	Administration/Management	20	5.7%
Professional experience	0–4 years	90	25.7%
	5–9 years	110	31.4%
	10–14 years	90	25.7%
	15+ years	60	17.1%
Highest qualification	Diploma	20	5.7%
	Bachelor's	110	31.4%
	Master's (MLIS/M.Sc.)	180	51.4%
	Doctorate (Ph.D.)	40	11.4%
Gender	Female	190	54.3%
	Male	155	44.3%
	Prefer not to say	5	1.4%
Age group	20–29	70	20.0%
	30–39	130	37.1%
	40–49	100	28.6%
	50+	50	14.3%
Policy exposure	Aware	210	60.0%
	Not aware	140	40.0%
Professional training (3 years)	Yes	160	45.7%
	No	190	54.3%
Primary user community	Students	140	40.0%
	Faculty/Researchers	80	22.9%
	General Public	90	25.7%
	K–12 Teachers/Students	25	7.1%
	Civil Society/NGOs	15	4.3%

The demographic distribution shows a solid state-by-state breakdown, with Enugu and Imo making up just about half of all respondents; this could indicate a higher concentration of all levels of tertiary institutions and/or public libraries in this region. The majority of respondents come from universities (45.7%), which may indicate that the academic library context has the most influence on the climate education practices in question. The professional role distribution shows a notable proportion of respondents who identify as reference and instructional staff (57.2% together), which corresponds with the roles most likely to incorporate climate literacy integration. The distribution of staff with different years of professional experience also appears balanced, though there is a

small concentration of mid-career (5-9 years, 31.4%) which may also support a higher likelihood for professional innovation paired with a sufficient level of experience.

Educational attainment is clearly high: more than half have master's degrees (51.4%), and 11.4% have doctorates, indicating potential for designing programs based on empirical evidence. 60% reporting policy exposure, and 45.7% reporting training in the last 3 years, show moderate levels of institutional engagement, however, the training gap (54.3% lacking recent training) may restrict the quality and scope of the programs. The distribution of age is predominantly 30-49 (65.7%), which is in line with an engaged working age population likely to spearhead and sustain programs. The principal user groups are predominantly students (40%), but considerable reach to the general populace (25.7%) indicates potential for climate services that focus on communities. Together, these attributes indicate the potential for differentiation in the performance of roles and the ability to respond to policy frameworks, with institutional context and professional capacity likely to be the most significant moderators.

Table 2: RQ1 - What is the degree to which climate education and climate-related information services are provided by librarians in South-East Nigeria.

Descriptive Statistics Summary for RQ1

Dimension	Mean (\bar{x})	SD	Interpretation
Climate education roles	3.43	0.62	Moderate-high engagement
Climate information services	3.36	0.65	Moderate engagement

Policy-enabled effectiveness	3.23	0.68	Moderate policy support
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Based on the Table provided above, Librarians from South-East Nigeria show a moderate-to-high level of involvement in climate education and a moderate level of involvement in the climate-related information service, with effectiveness shaped by a weakly supportive policy framework. These statements further show: **Emphasis in roles:** Teaching and curation are comparatively more pronounced, whereas advocacy and campaigning are more pronounced; **Emphasis in services:** Strong in reference services and resource updating; localization and impact evaluation are weak; and **Policy context:** Policies are present, but in a patchy manner; there are gaps in resources and evaluation.

Table 3: RQ2 - What is the extent to which librarians' climate education initiatives differ by institutional affiliation and the level of professional experience in South-East Nigeria?

ANOVA Results for RQ2 by Institutional Type

Source	SS	df	MS	F	p	η^2
Between groups	12.48	4	3.12	5.21	0.0006	0.057
Within groups	205.18	345	0.59			
Total	217.66	349				

ANOVA Results for RQ2 by Experience Level

Source	SS	df	MS	F	p	η^2
Between groups	9.76	3	3.25	4.38	0.0046	0.041
Within groups	207.90	346	0.60			
Total	217.66	349				

The tables show that there is a notable difference in Climate education practices depending on the type of institution and the level of experience of the practitioner. The effects are

small-to-moderate ($\eta^2 \approx 0.04-0.06$) and the higher level of involvement of universities and mid-career professionals is probably due to more comprehensive teaching responsibilities and additional administrative duties.

Table 4: What is the extent to which the differences in regional and institutional climate policy frameworks affect librarians' roles as climate educators?

Table 4: ANOVA Results for RQ3 by Policy Exposure

Source	SS	df	MS	F	p	η^2
Between groups	8.62	1	8.62	13.78	0.0003	0.038
Within groups	216.12	348	0.62			
Total	224.74	349				

ANOVA Results for RQ3 by Policy Strength

Source	SS	df	MS	F	p	η^2
Between groups	15.94	2	7.97	12.21	0.0000	0.101
Within groups	208.80	347	0.60			
Total	224.74	349				

Tables in the above section show that Policy Exposure and Policy Strength have a significant relation to perceived effectiveness. It also shows a moderate effect for Policy Strength ($\eta^2 = 0.10$). More effective policies that have a stronger policy framework (clear guidelines, sufficient resources, and evaluation) score higher. Weak and strong policy conditions, and particularly the strength of the policy, are important predictors of the effectiveness of the scope and scale of climate education. Without supportive policy,

education librarians' work is inconsistent and marginal. This supports the need for a “new social contract” in education, where institutions integrate sustainability competencies and establish collaborative pathways for educators, particularly librarians, to build climate literacy and community resilience.

Recommendations

From the results five policy-related suggestions were made:

1. Prescribe the inclusion of climate education in library policies, and with that, position librarians as key players in the sustainability framework.
2. Sustain capacity-building initiatives whereby librarians receive ongoing training in climate literacy, information processing, and community engagement.
3. Resource sustainability in libraries should centre on climate education, including the development and funding of contextual materials and tools for evaluation of climate education.
4. Create and sustain partnerships with libraries, schools, and climate education agencies to promote and manage cross-sector collaboration.
5. Integrate the assessment of librarians' climate literacy and the evaluation of other contributed actions into policy to ensure accountability and to assess collaboration systematically.

Advanced studies are needed for comparisons of the roles of education librarians in various contexts, for longitudinal studies of changes in levels of librarians' active participation, or for studies evaluating specific strategies. Research should also incorporate the tensions between librarianship and indigenous ways of knowing in climate education, and in so doing offer richer conceptual and pragmatic possibilities of culturally responsive climate literacy as librarians exercise their roles in various cultural settings.

Conclusion

The study demonstrates that librarians in South-Eastern Nigeria have made and are still making strides in climate education. Even though there are several types of institutions, the impact of a given librarian is still dependent on the professional level, the position held, and the climate education policy in effect, or lack thereof. In this case, the most impactful institutions are the universities, and the most impactful librarians are the mid-career librarians. Certainly, there is a policy related to the climate education; in this case, the impact is high. It is clear that there are policies that support climate education, but they are not extensive. With policies in place, there is a potential to integrate climate education fully into the roles of librarians. However, there is a gap in policy support and strategic integration throughout the institution. There should be a clear policy on the roles of librarians and administrative support to improve the role of climate education in the library.

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