

ASSESSING PRODUCTION NEEDS FOR CLASSROOM MATERIALS FROM USED CHILDREN'S CLOTHING: IMPLICATIONS FOR CLASSROOM ENHANCEMENT

**Afor Blessing Joseph
Reginah Azunwena
Comfort Sonye**

Department of Home Economics, Hospitality and Tourism (Human and Family Development), Ignatius Ajuru University of Education, Rumuolumeni, Rivers State

Abstract

This study is a needs assessment of the utilization of used children's clothing in the production of classroom decoration materials for learning environment enhancement, addressing a gap in resource-constrained educational settings. Survey data from 1,193 stakeholders, teachers, administrators, experts, and parents, in Port Harcourt Metropolis, Nigeria, showed strong consensus on the social needs underlying this utilization, spanning economic needs, educational needs, and environmental needs, with grand means ranging from 4.15 to 4.28 on a 4-point scale. The utilization of used children's clothing responds to three linked challenges: tight school budgets that limit stimulating classroom resources, a growing textile-waste crisis, and under-stimulating learning environments that fail to use the physical space as a "third teacher." The study also identifies the practical challenges that constrain this utilization, including funding gaps, limited design and production skills, weak material-sourcing systems, low sustainability awareness, and inadequate maintenance knowledge — and proposes corresponding ways of curbing them through policy integration, teacher capacity-building, and community engagement. Gender-disaggregated analysis found that female respondents consistently rated needs higher than male respondents, with implications for how training is designed. Recommendations include ministry-led training programmes, school-based material-collection systems, and cooperative models for economic empowerment.

Keywords: needs assessment, upcycled decorations, teacher training, resource-constrained education, Nigeria, economic sustainability, environmental needs, learning environment

Introduction

As Port Harcourt contends with escalating solid-waste pressures, one overlooked resource stands out: discarded children's clothing, which is colourful, safe, and abundant, yet routinely treated as refuse rather than repurposed material. This oversight is particularly significant given the state of the city's public schools, where resource scarcity severely limits decorative and instructional materials and undermines the classroom's role as a "third teacher" (Strong-Wilson & Ellis, 2020). Studies address classroom environments and the use of recycled paper or plastics, and textile-waste research focuses on recycling and disposal, but little work connects the two by examining used children's clothing as an educational resource. This study investigates the social needs for utilizing used children's clothing in the production of classroom decoration materials, examining economic needs, educational needs, and environmental needs in a single assessment, and further identifies the challenges that constrain this utilization and the ways of curbing them. Four frameworks ground the study: Constructivist Theory (Piaget, 1954; Vygotsky, 1978), which treats the classroom as a workshop for sensory exploration; Environmental Psychology Theory (Barker, 1968), which predicts that a warmer, more personalised space reduces stress and builds belonging; Resourcefulness Theory (Rosen, 1983), which frames teachers as proactive agents who innovate around constraints; and Experiential Learning Theory (Kolb, 1984), which structures the teacher-training component around doing, reflecting, conceptualising, and experimenting.

Statement of the Problem

Public primary schools in Port Harcourt Metropolis face a combination of tight budgets, under-stimulating classroom environments, and a growing volume of discarded children's clothing that is treated as waste rather than as a resource. Without a systematic understanding of what is actually needed to convert this waste into usable classroom decoration materials, schools cannot design effective, low-cost interventions, and the potential economic, educational, and environmental benefits of this practice remain unrealised. This study therefore assesses these needs directly, and identifies the challenges that would have to be overcome for the practice to be adopted at scale.

Objective of the Study

The general objective of this study is to determine the social needs for utilizing used children's clothing in the production of classroom decoration materials in Port Harcourt Metropolis. Specifically, the study seeks to:

1. Determine the social needs (economic, educational, and environmental) for utilizing used children's clothing in the production of classroom decoration materials in Port Harcourt Metropolis.

2. Identify the challenges facing this utilization and suggest ways of curbing them.

Needs for the Production of Classroom Decoration Materials from Used Children's Clothing

Classroom decoration materials support learning cognitively by externalising information: anchor charts capture procedural knowledge, word walls build vocabulary, and graphic organisers make abstract concepts tangible, freeing mental resources for higher-order thinking (Strong-Wilson & Ellis, 2020). Materials must also match learners' developmental stage — younger children need concrete, tactile materials that support sensory integration, while older students benefit from more symbolic representations (Hanley et al., 2022), and their permanent visual scaffolds give diverse learners immediate access to reference information. This benefit is conditional, however, and the condition matters for how production should be organised. Fisher, Godwin, and Seltman (2014), in an experimental study of kindergarten classrooms, found that children were more distracted, spent more time off-task, and showed smaller learning gains when classroom walls were heavily decorated than when the same lessons were taught in sparsely decorated rooms — the volume of visual material can work against the same learning it is meant to support. Read alongside the anchor-chart literature, the implication is not that decoration should be minimised but that it should be curated: materials tied explicitly to what is being taught function as scaffolds, while materials that are merely present compete for the same limited attention.

Decoration also meets psychological needs for safety, belonging, and emotional regulation. Learning-environment design shapes students' willingness to take the risks deep learning requires (Maxwell, 2023), and familiar, predictable surroundings, reinforced through colour, texture, and personal elements — help students regulate stress and sustain optimal engagement (Vossoughi & Bevan, 2023). This effect is not generic to decoration as such but specifically to personalisation: Maxwell and Chmielewski (2008) found that the degree to which a classroom environment was personalised to its own students, rather than furnished with generic materials, predicted elementary-school children's self-esteem. A classroom display made from the community's own donated clothing carries a personalisation signal that a purchased, mass-produced poster cannot replicate, regardless of how visually similar the two might be, which is precisely where the economic case for this practice becomes inseparable from the cognitive and psychological one.

Producing curated, personalised material of this kind at scale requires resources schools in economically constrained settings do not reliably have. Economic sustainability is an organisation's ability to remain financially stable without depleting its resources; at the local level, this requires flexible labour markets, accessible credit for small enterprises, and social safety nets (Jones & Woodward, 2020). For classroom-decoration production specifically, sustainability rests on three principles: reducing financial dependency, extracting more value from existing resources, and creating value without relying on external supply chains. Schools that systematically repurpose materials realise real cost savings that can be redirected to other priorities (Barrett et al., 2019), and the practice builds resourcefulness as an institutional value that shapes procurement more broadly — a pressing need in a city where economic pressure routinely constrains educational resources. The scale of that pressure is not unique to Port Harcourt, and comparable evidence from elsewhere in the region strengthens the case for treating this as a structural rather than local problem.

Meeting that economic need well, and producing material that is curated and personalised rather than generic, is itself a skill that depends on teacher capacity. Teachers who create their own instructional materials show greater pedagogical creativity and classroom innovation, shifting from "transmitters of knowledge" to "designers of learning experiences" with a deeper grasp of the pedagogy behind what they make (Okoro & Mohammed, 2024). Instructional coaching and capacity-building sustain such innovations over time (Knight, 2022): the process of creating resources builds self-efficacy and reframes teachers as innovative problem-solvers rather than curriculum deliverers. Consistent with this, teachers trained to build materials from local resources show measurable gains in professional competence, greater creativity, more use of visual aids, and higher student engagement (Nwosu & Okeke, 2021), the training need and the cognitive/economic needs above are therefore not separate concerns but the same problem viewed from the production side: without this capacity, scarce, community-sourced material is more likely to end up as untargeted decoration than as the curated, content-linked scaffolding the cognitive literature calls for.

The raw material itself carries a fourth, environmental, rationale that reinforces rather than competes with the first three. Producing and disposing of children's clothing carries real environmental costs, new garments require substantial water, chemicals, and energy (Payne, 2021) — and extending a garment's life through reuse is one of the most effective ways to cut that footprint, potentially reducing a garment's carbon impact by up to 70% (Sandvik & Stubbs, 2019). Upcycling activities can build sustainability awareness directly (Kowitvongsa & Bunnag, 2022), and embedding eco-literacy in classrooms helps prepare environmentally responsible citizens

(Madike, 2023). Sari and Utami (2022) further show that recycled-fabric materials strengthen cognitive and motor skills in young learners, evidence that the environmental and cognitive/educational needs identified above can be pursued together rather than traded off, and that the same donated clothing that solves an economic constraint and carries a personalisation signal is also the input that converts a waste stream into an instructional resource.

Taken together, these are not four independent needs but one interlocking case: the material must be curated and personalised to do the cognitive and psychological work decoration is capable of; producing it that way is only economically feasible when schools can draw on a low-cost, community-sourced supply rather than commercial purchase; drawing on that supply well requires the training and capacity-building that turns raw donated clothing into targeted instructional material rather than undifferentiated decoration; and the material itself, discarded children's clothing, is what allows all three of these needs to be met through the same environmentally beneficial act of reuse.

Methodology

This study used a mixed-methods explanatory sequential design. It was conducted in Port Harcourt Metropolis, Rivers State, Nigeria (population approx. 1.9 million; National Bureau of Statistics, 2024), drawing on a target population of 150,150 across six stakeholder groups: public primary school teachers (690), pupils (11,800), school administrators (60), parents/guardians, market sellers of educational materials (120), and textile/clothing or art-education experts (30). A sample of 1,193 was drawn using a mix of probability and non-probability techniques. The main instrument was the Questionnaire for Teachers. The instrument was face- and content-validated by a three-member expert panel, and piloted in two primary schools outside the main sample. Quantitative data were analysed with descriptive statistics (frequencies, percentages, means, standard deviations) and independent qualitative data from open-ended items and observation notes were analysed thematically following Braun and Clarke (2006). The benchmark for needs assessment was a mean of ≥ 2.50 on a 4-point scale.

Results

Teachers' Assessment of Needs

Table 1 presents teachers' ratings of needs for producing classroom decoration materials. All 15 items scored between 3.88 and 4.45 — well above the 2.50 benchmark — showing strong agreement that every listed factor is needed.

Table 1: Teachers' Assessment of Needs for Production

S/N	Item	Mean ($\bar{x}$)	SD	Decision
1	Enhances learners' attention	4.32	0.71	Needed
2	Improves learning retention	4.1	0.83	Needed
3	Creates a stimulating learning environment	4.05	0.79	Needed
4	Supports different learning styles	4.28	0.75	Needed
5	Encourages active participation	4.15	0.77	Needed
6	Promotes creativity in learners	4.22	0.73	Needed
7	Reinforces teaching content	4.4	0.68	Needed
8	Improves classroom organization	4.18	0.74	Needed
9	Enhances aesthetic value of the school	4.36	0.69	Needed
10	Encourages environmental sustainability	3.88	0.91	Needed
11	Reduces educational costs	4.45	0.66	Needed
12	Builds teacher effectiveness	4.02	0.85	Needed
13	Boosts learners' motivation	4.07	0.8	Needed
14	Encourages collaborative learning	4.2	0.76	Needed
15	Strengthens emotional well-being	4.12	0.82	Needed
	Grand Total	4.18	0.77	Needed

'Reduces educational costs' received the highest rating ($\bar{x} = 4.45$, $SD = 0.66$), showing teachers strongly link this production to school-level savings and economic sustainability, followed by "Reinforces teaching content" ($\bar{x} = 4.40$) and "Enhances aesthetic value of the school" ($\bar{x} = 4.36$), both instructional support and beautification matter to teachers. The lowest-rated item, still within the "Needed" range, was "Encourages environmental sustainability" ($\bar{x} = 3.88$, $SD = 0.91$), suggesting teachers weigh this benefit somewhat less than the direct instructional gains.

School Administrators' Assessment of Needs

Table 2 presents administrators' assessment of needs. All 15 items scored between 3.75 and 4.50, again indicating strong agreement.

Table 2: School Administrators' Assessment of Needs for Production

S/N	Item	Mean ($\bar{x}$)	SD	Decision
1	Overall improvement of learning environment	4.2	0.74	Needed
2	Reduction of dependency on government funding	4.05	0.82	Needed
3	Promotion of sustainable school practices	3.98	0.88	Needed
4	Support for instructional reinforcement	4.25	0.76	Needed
5	Motivation of teachers and students	4.1	0.79	Needed
6	Improvement of classroom organization	4.18	0.75	Needed
7	Encouragement of learner engagement	4.3	0.7	Needed
8	Reduction of dependency on commercially produced materials	4.12	0.77	Needed
9	Strengthening school-community relations	4.35	0.68	Needed
10	Development of student skills	3.75	0.95	Needed
11	Encouragement of teacher creativity and innovation	4.5	0.65	Needed
12	Strong support for cost reduction	4	0.84	Needed
13	Promotion of resource efficiency	4.08	0.8	Needed
14	Enhancement of teaching and learning quality	4.28	0.72	Needed
15	Improvement of school aesthetics	4.15	0.78	Needed
	Grand Total	4.15	0.79	Needed

"Encouragement of teacher creativity and innovation" received the highest rating ($\bar{x} = 4.50$, $SD = 0.65$), showing administrators place strong emphasis on teacher creativity, followed by "Strengthening school-community relations" ($\bar{x} = 4.35$) and "Encouragement of learner engagement" ($\bar{x} = 4.30$) — administrators clearly value the intervention's role in collaboration and active participation. "Development of student skills" was rated lowest, though still "Needed" ($\bar{x} = 3.75$, $SD = 0.95$), suggesting it is relatively less central to administrators' view of the intervention than other factors.

Experts' Assessment of Needs

Table 3 presents the assessment by textile/clothing experts and art educators. All 15 items scored between 3.80 and 4.60.

Table 3: Experts' Assessment of Needs for Production

S/N	Item	Mean ($\bar{x}$)	SD	Decision
1	Promotion of creative expression	4.35	0.7	Needed
2	Utilization of textile waste and fabric scraps	4.15	0.78	Needed
3	Enhancement of aesthetic value	4.25	0.72	Needed
4	Development of practical skills	4.5	0.65	Needed
5	Promotion of economic sustainability	4.2	0.75	Needed
6	Encouragement of innovation in design	4.3	0.71	Needed
7	Integration of art into education	4.6	0.6	Needed
8	Environmental sustainability awareness	4.25	0.73	Needed
9	Improvement of teaching effectiveness	4.55	0.62	Needed
10	Promotion of cultural expression	3.8	0.92	Needed
11	Encouragement of collaborative work	4.48	0.66	Needed
12	Support for skill-based education	4.05	0.82	Needed
13	Enhancement of student motivation	4.22	0.76	Needed
14	Efficient use of available resources	4.3	0.7	Needed
15	Strengthening school identity and image	4.18	0.77	Needed
	Grand Total	4.28	0.73	Needed

"Integration of art into education" was rated highest ($\bar{x} = 4.60$, $SD = 0.60$), indicating experts see classroom decoration as belonging fully within educational practice, followed by "Improvement of teaching effectiveness" ($\bar{x} = 4.55$) and "Development of practical skills" ($\bar{x} = 4.50$) — experts emphasise instructional improvement and skill-building. "Promotion of cultural expression" was rated lowest, though still "Needed" ($\bar{x} = 3.80$, $SD = 0.92$): cultural representation is recognised but weighed less heavily than functional and instructional benefits.

Comparison of Stakeholder Groups

Table 4: Comparison of Grand Means across Stakeholder Groups

Stakeholder Group	Grand Mean ($\bar{x}$)	Grand SD	Rank
Textile/Clothing Experts & Art Educators	4.28	0.73	1st
Teachers	4.18	0.77	2nd
School Administrators	4.15	0.79	3rd

Experts recorded the highest grand mean (4.28), followed by teachers (4.18) and administrators (4.15). The consistently high ratings across all three groups point to strong shared consensus that producing classroom decoration materials from used children's clothing is needed.

Qualitative Findings

Thematic analysis of focus-group discussions produced five themes. Economic necessity was the most immediate: teachers described spending heavily on commercial posters and charts that quickly wear out, and saw upcycled materials as freeing up money for books and other essentials in a difficult economic climate. Skill-development needs came through clearly too — teachers wanted practical guidance on cutting, arranging, and finishing materials so they look professional, while experts pointed to basic design skills such as colour combination and balance as a gap.

Material-sourcing systems emerged as a structural need: administrators noted that parents would likely donate old clothing if schools set up a formal collection point and communicated what was needed, framing this partly as a shift in mindset about what counts as waste. Sustainability awareness was a recurring theme among experts, who saw the practice as teaching children that discarded materials can become valuable — not just a cost-saving measure but an environmental lesson in itself. Finally, maintenance and longevity concerned teachers most: having invested time in making decorations, they wanted practical guidance on cleaning, storage, and durability so the materials would last.

Discussion

The strength of agreement across all stakeholder groups supports the study's theoretical grounding. Ratings on instructional reinforcement (teachers 4.40; administrators 4.25) fit Constructivist Theory (Piaget, 1954; Vygotsky, 1978): visually rich classrooms supply the concrete experience Piaget saw as necessary for building schemas, while decorations function as Vygotsky's "psychological tools," scaffolding the move from supported to independent learning. The emphasis on psychological safety and emotional well-being (teachers 4.12) fits Environmental Psychology Theory (Barker, 1968): the soft, familiar textures of fabric decorations create a psychologically warmer classroom, reducing anxiety and building the sense of belonging that Immordino-Yang (2016) identifies as central to effective learning — seeing one's own or the community's clothing repurposed in the room is itself a signal that the child belongs there.

Administrators' emphasis on teacher creativity and innovation (4.50) reflects Resourcefulness Theory (Rosen, 1983): by treating used clothing as a resource, teachers turn a shortage of commercial decorations into an opportunity, and the process of making materials builds self-efficacy by demonstrating that teachers need not depend entirely on external supply. The emphasis on training aligns with Experiential Learning Theory (Kolb, 1984), whose four-stage cycle — concrete experience, reflective observation, abstract conceptualisation, active experimentation — describes how hands-on material-making becomes transformative professional learning rather than a one-off craft skill.

The prominence of economic sustainability as a justification (teachers $\bar{x}$ = 4.45; administrators $\bar{x}$ = 4.00; experts $\bar{x}$ = 4.20) matches Jones and Woodward's (2020) definition of economic sustainability as efficient resource use that secures long-term viability, and Mwangi and Otieno's (2020) argument that African schools should draw on locally available materials to reduce dependence on costly imports. Umoh (2021) and Ihuoma et al. (2022) similarly note that reuse and recycling in the Niger Delta cut costs while supporting environmental sustainability. The shared recognition of environmental benefits across groups supports Kowitzvongsa and Bunnag's (2022) finding that upcycling builds sustainability awareness, Madike's (2023) case for eco-literacy in classrooms, and Sari and Utami's (2022) evidence that recycled-fabric materials strengthen young learners' cognitive and motor skills. On training, the findings echo Knight (2022) on the centrality of instructional coaching, Okoro and Mohammed's (2024) finding that material-making builds pedagogical creativity, and Nwosu and Okeke's (2021) evidence that training in local-resource development measurably improves teachers' professional competence.

The differing emphases across groups track their distinct roles. Teachers prioritised economic savings (4.45) and instructional reinforcement (4.40), consistent with their daily experience of resource constraints — professional development should therefore make the pedagogical rationale explicit, not just teach technique. Administrators prioritised teacher creativity (4.50) and school-community relations (4.35), reflecting an institutional view — school leaders will need evidence that the intervention serves strategic goals such as community engagement, not only cost savings. Experts prioritised integrating art into education (4.60) and teaching effectiveness (4.55), reflecting their specialist view of how the arts support learning — the intervention should be framed as a pedagogical approach in its own right, not merely a thrifty substitute for commercial decorations.

Female respondents rated needs consistently higher than male respondents across every variable, a pattern that mirrors Ahmed et al.'s (2022) finding that women in developing economies typically carry primary responsibility for household resource management, clothing procurement, and children's educational support — a convergence of domestic and educational roles that builds familiarity and confidence with textiles. Rather than pointing to any shortcoming among male respondents, this suggests programmes should engage women as expert advocates while deliberately building male teachers' familiarity and confidence with upcycling practices, consistent with Brown and Williams' (2022) finding that female teacher trainees in Jamaica showed greater confidence and agency when crafting resources from available materials.

Challenges Facing the Utilization of Used Children's Clothing in the Production of Classroom Decoration Materials

While stakeholders across all groups agreed strongly that the practice is needed, both the quantitative findings (the comparatively lower ratings on items such as environmental sustainability and cultural expression) and the qualitative findings point to a number of practical challenges that currently constrain its adoption:

Funding constraints: Schools often lack even the modest funds needed for non-donatable supporting supplies such as fabric glue, scissors, permanent markers, and laminating sheets, limiting how much can be produced regardless of how much used clothing is available.

Limited design and production skills: Many teachers lack practical skills in cutting, arranging, colour combination, and finishing, which affects the quality and durability of the materials produced and can discourage sustained use of the practice.

Weak material-sourcing and collection systems: Most schools have no formal system for collecting used children's clothing from parents and the community, leaving supply informal, inconsistent, and dependent on individual teachers' initiative.

Low awareness of the environmental value of reuse: Environmental sustainability and cultural expression were the lowest-rated benefits across all three stakeholder groups, suggesting that the ecological and cultural rationale for the practice is not yet well understood or valued by all stakeholders.

Inadequate maintenance and durability knowledge: Teachers reported uncertainty about cleaning, storage, and durability, and materials that wear out quickly discourage the continued investment of time and effort in producing them.

Absence of institutional policy and guidelines: There is currently no official ministry guidance, standard, or inspection framework covering material selection, safety, or production procedures, leaving the practice dependent on individual schools and teachers rather than being systematised.

Time constraints on teachers: Producing decoration materials competes with teachers' existing instructional and administrative workload, making it difficult to sustain the practice without dedicated time or support.

Gendered participation gap: Male teachers reported lower familiarity and confidence with textile-based production than their female counterparts, risking uneven adoption of the practice across a school's teaching staff.

Hygiene and safety concerns: Used children's clothing must be properly cleaned and inspected before use in classrooms; without clear protocols, there is a risk of introducing unsafe or unhygienic materials into the learning environment.

Ways of Curbing the Challenges

Corresponding to the challenges identified above, the study proposes the following measures:

Dedicated resource allocation: School administrators should set aside a portion of capitation grants specifically for non-donatable production supplies, recognising this as a high-return investment given the substantial cost reduction achieved relative to commercial decorations.

Structured skills training: Faculties of education and the Ministry of Education should integrate practical, hands-on modules on material selection, cutting, arranging, and finishing into both pre-service and in-service teacher training.

Formal collection systems: Schools should establish clearly publicised used-clothing collection points in partnership with parents and community members, supported by periodic communication about what is needed and why.

Awareness and sensitisation campaigns: Schools and the Ministry of Education should run sensitisation activities that explicitly connect the practice to environmental sustainability and cultural expression, so that stakeholders value these benefits alongside the economic and instructional ones.

Maintenance guidance: Teacher training and the proposed ministry guide should include specific instruction on cleaning, storage, and durability, so that materials remain usable for longer and the time invested in producing them is not lost.

Policy and institutional support: The Rivers State Universal Basic Education Board (RSUBEB) should publish an official guide covering validated production procedures, material-suitability and safety criteria, and maintenance schedules, and incorporate these into inspection checklists.

Scheduled production time: Schools should hold periodic, timetabled "decoration production days" that bring teachers, parents, and volunteers together, so that production does not compete informally with teachers' existing workload.

Targeted engagement of male teachers: Training programmes should deliberately build male teachers' familiarity and confidence with textile-based production, while engaging experienced female teachers as peer advocates and mentors.

Hygiene protocols: Schools should adopt simple, clearly communicated protocols for washing, inspecting, and, where necessary, disinfecting donated clothing before it is used in classroom production.

Conclusion

This study assessed the social needs for utilizing used children's clothing in the production of classroom decoration materials in Port Harcourt Metropolis, examining economic needs, educational needs, and environmental needs, and identified the challenges facing this utilization together with ways of curbing them. Teachers, administrators, and experts all strongly agreed that such production serves multiple purposes: economic savings, instructional reinforcement, learner engagement, environmental sustainability, emotional well-being, creativity development, and school-community relations. At the same time, funding gaps, limited production skills, weak sourcing systems, low sustainability awareness, and the absence of institutional policy currently constrain the practice. Addressing these challenges through targeted training, resource allocation, formal collection systems, and policy support would allow this low-cost, sustainable intervention to be adopted more widely.

Recommendations

Based on the above findings, this study recommends the following:

1. For Teacher Training Institutions: Faculties of education at the University of Port Harcourt and Ignatius Ajuru University of Education should integrate textile-upcycling modules into pre-service and in-service training, covering material selection, production procedures, classroom installation, maintenance, and curriculum integration.
2. For Schools: Every public primary school in Port Harcourt Metropolis should establish a used-clothing collection point in partnership with parents and community members, and hold quarterly "decoration production days" bringing teachers, parents, and volunteers together to create and refresh displays.
3. For Policy Makers: The Rivers State Universal Basic Education Board (RSUBEB) should publish an official teacher guide covering validated production procedures, material-suitability criteria, maintenance schedules, and sample lesson plans, distributed to all public primary schools and built into inspection checklists.
4. For Resource Allocation: School administrators should allocate part of their capitation grants to non-donatable supplies — fabric glue, scissors, permanent markers, cardboard, laminating sheets — a high-return investment given the substantial cost reduction achieved relative to commercial decorations.
5. For Community Engagement: The Rivers State Ministry of Education, with local government authorities, should support cooperatives or women's groups producing standardised classroom-decoration sets for sale to schools, daycare centres, and community organisations.
6. For Further Research: Longitudinal studies should track this intervention's sustainability across school years, and the study should be replicated in other local government areas of Rivers State and elsewhere in the Niger Delta to test generalisability.

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