



Enforcing Rural Youths through Nonformal Agricultural Skills Acquisition Programs For Building Inclusive Society in Rivers State

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Abstract

The study investigated rural youths through non-formal agricultural skills acquisition for building inclusive society in Rivers State. Rural youths in Rivers State continue to face challenges of unemployment, poverty, and social exclusion, despite the region's vast agricultural potential. These conditions have contributed to rural-urban migration, reduced productivity, and weakened social cohesion. Non-formal agricultural skills acquisition programs present an alternative pathway for equipping young people with practical competencies outside the conventional school system, thereby enhancing empowerment and inclusivity. Three research questions and three hypotheses were formulated for the study, the study adopted a descriptive research design, total of 200 participants (115 males and 85 females) were selected using multistage sampling technique, and data were collected from rural youths through structured questionnaires and interviews. Findings revealed that participation in non-formal agricultural training significantly improved skills in crop production, aquaculture, agro-processing, and agribusiness management, which increased employability and income generation. The programmes also promoted social integration by reducing idleness, curbing restiveness, and enhancing youths' contributions to community development. However, challenges such as inadequate funding, weak institutional support, and limited access to modern farming technologies, and lack of start-up capital hindered programme effectiveness. The study concludes that non-formal agricultural skills acquisition is a vital tool for empowering rural youths and fostering inclusivity in Rivers State. It recommends increased government support, strengthened public-private partnerships, provision of agricultural credit facilities, and integration of modern technologies, including ICT, into training curricula to ensure sustainability. By strategically investing in non-formal agricultural education, policymakers can unlock the potential of rural youths and a more inclusive and sustainable society.

Keywords: Agribusiness, Agricultural skills acquisition, Empowerment, Non-formal education, Rural youth, Sustainable development

Introduction

Rural youth unemployment and underemployment remain pressing development challenges in Nigeria, undermining household welfare, food security and social inclusion. National policy emphasizes youth focused agricultural interventions and strengthened extension services as pathways to youth employment and rural transformation. Non-formal agricultural skills-acquisition programmes (short courses, apprenticeships, cooperatives and community training) have emerged as practical, low-barrier routes for equipping rural young people with technical, business and life-skills needed for agri-entrepreneurship. (Nlebem, B.S (2024) indicate such

non-formal interventions can increase youth interest, build agri-preneurial intent and improve livelihoods when linked to finance, markets and mentorship, Worldbank (2019).

Youth unemployment and under-employment in rural Nigeria remain persistent development challenges, with strong implications for food security, poverty, and social inclusion. National policy frameworks emphasise the role of youth skills development—and specifically non-formal and short-course agricultural training—as pathways to increase youth participation in agriculture and agribusiness (National Youth Policy, 2019). Non-formal agricultural skills acquisition (short practical courses, apprenticeships, farmer field schools, cooperative training and community extension workshops) is therefore positioned as a low-barrier mechanism to equip rural youths with both technical and enterprise skills required for productive engagement in value chains.

Rivers State presents a particularly urgent context for strengthening such non-formal interventions. The state's rural areas face environmental shocks (including oil spill impacts), structural unemployment and youth restiveness that together constrain livelihood options and community inclusion. Local programme evaluations and field studies indicate that targeted agribusiness and non-formal training interventions have produced promising short-term uptake and group participation among youth, but sustained impact is often limited by weak market linkages, limited access to start-up finance, and inadequate post-training support. These local dynamics underscore the need to “enforce” (scale and strengthen) non-formal agricultural skills programmes to generate durable pathways into productive employment and inclusive rural development in Rivers State.

Rivers State presents both urgent need and opportunity: recurrent environmental shocks (e.g., oil spills), structural unemployment and youth activism have constrained productive rural livelihoods, while localized agribusiness training and empowerment initiatives in LGAs such as Gokana have shown promising job-creation outcomes. Ifeanyi-Obi, Uloh & Asaonye (2005) Therefore, enforcing (scaling and strengthening) non-formal agricultural skills acquisition programmes for rural youths in Rivers State is a timely strategy for building a more inclusive society—one that integrates young people into productive value chains, reduces vulnerability, and promotes local economic development.

1. Effectiveness of non-formal training for youth livelihoods

Non-formal training and entrepreneurship programmes can positively influence youth employment and livelihood outcomes—but effects are heterogeneous and highly dependent on

programme design, duration, and follow-up support. Programs that combine hands-on learning with business and market training and that include mentoring or post-training linkages tend to show stronger and more sustained outcomes than short, one-off trainings, where evaluations measure medium-term enterprise creation and incomes, evidence of impact is clearer.

2. Training content and pedagogy: technical + enterprise skills

A purely technical agriculture training (production techniques) is necessary but not sufficient to spur youth entrepreneurship. Effective programmes integrate technical skills with enterprise modules—market analysis, basic bookkeeping, value-chain orientation and digital/ICT literacy—so trainees can identify viable value-chain opportunities and manage micro-enterprises, trainees exposed to combined technical-business curricula exhibit higher agri-entrepreneurial intentions and a greater probability of forming cooperatives or start-ups.

3. Post-training support: finance, markets and mentorship

Post-training support (access to credit, input supply, extension follow-up, and market linkages) as the critical determinant of whether training translates into sustained livelihood gains. Evaluations of agribusiness empowerment projects indicate that training with integrated financial linkages (microcredit, grants, or voucher systems) and facilitated market contracts yields larger income effects than training alone. Where post-training mentorship and organized group structures (cooperatives) are present, trainees are more likely to scale activities and reduce risk.

4. Youth perceptions and uptake: relevance and incentives

youth perceptions of agriculture reveal that young people often view farming as low-status, low-return, or risky unless it offers clear pathways to income and upward mobility. Non-formal programmes that actively demonstrate profitable value-chain niches (agro-processing, horticulture, aquaculture, mechanized services) and that use demonstration plots or apprenticeships are better at changing perceptions and increasing uptake. Training that accounts for youth aspirations-portable skills, linkages to urban markets, and ICT-enabled marketing-tends to register higher participation and retention(Adeyanju, Mburua & Mignouna (2022)

5. Evidence from Nigeria and Rivers State

Local evaluations of government and donor-supported youth agro-programmes (e.g., N-Power Agro and state agribusiness trainings) indicate short-run increases in knowledge, group formation and some enterprise activity; however, sustained income gains remain uneven where credit, extension coverage, and market access are weak. Specific studies in Rivers State report

improved youth participation in agricultural groups and enhanced skills after non-formal training, but also note environmental constraints (oil-affected soils), uneven geographic coverage, and weak programme monitoring. These findings imply that scaling and enforcement must address local structural barriers and link training to broader value-chain support services (Komolafe, Taiwo, & Oyewole. (2024)

6. Policy environment and enabling institutions

Nigeria's revised National Youth Policy (2019) and related development strategies emphasize youth skills development, inclusion in value chains, and creation of enterprise development centres-policy aims that support expanded non-formal agricultural training. Regional and international TVET and agricultural education initiatives (including lessons from African ATVET and vocational platforms) further highlight the importance of aligning curricula to market demand and building multi-stakeholder partnerships (government extension, private sector, NGOs) for scale. Policy analyses stress that without coherent linkages to finance, extension, and market infrastructure, training alone will fall short of delivering inclusive outcomes for rural youth, Non-formal training effectiveness — Systematic and scoping reviews across sub-Saharan Africa show that non-formal entrepreneurship and skills programmes can be effective when courses are hands-on, contextually relevant and connected to markets; however, impact varies widely by programme design, duration and post-training support, Skills → agri-preneurial uptake — Empirical studies in Nigeria find that acquisition of specific agricultural skills (technical and business) mediates the relationship between agricultural education and agri-preneurial intentions, suggesting training that combines technical instruction with enterprise skills raises the likelihood that youth will start or expand agribusinesses. Local evidence from Rivers State — Recent field studies and programme evaluations in Rivers State report that targeted agribusiness training and cooperative approaches have improved job creation and group participation in agricultural activities among youths, but sustained impact often requires access to credit, extension services and value-chain linkages. Enabling environment and policy — Nigeria's National Youth Policy and related instruments emphasize scaling youth access to finance, strengthening extension ratios and establishing enterprise development centers—measures that complement non-formal training and increase chances of durable inclusion, Despite policy attention and isolated interventions, many rural youths in Rivers State remain excluded from productive agricultural opportunities due to gaps in accessible, market-oriented non-formal training, limited post-training finance and weak extension support. This results in persistent youth unemployment, migration to urban areas, frustration and reduced community inclusion—undermining both social cohesion and local

food systems. The study is therefore anchored in the practical policy aim of exploring how enforced, better-designed non-formal agricultural skills acquisition programmes can empower rural youth in Rivers State—improving incomes, stimulating agribusiness start-ups, and strengthening social inclusion—while addressing key programme design and enabling-environment constraints.

Purpose of the study

The main purpose of the study was to examine how enforcing (scaling and strengthening) non-formal agricultural skills acquisition programmes can empower rural youths in Rivers State and contribute to building a more inclusive society by improving livelihood outcomes, market participation and social integration. Specifically, the study sought to:

1. Assess the current scope, design and coverage of non-formal agricultural skills acquisition programmes available to rural youths in selected Local Government Areas of Rivers State.
2. Evaluate the effects of these programmes on youth livelihood outcomes (employment, agribusiness start-ups and income) and social inclusion.
3. Identify barriers and enabling factors (e.g., access to finance, extension support, market linkages) and recommend practical strategies for enforcing and scaling effective non-formal agricultural training in Rivers State.

Research Questions

For the purpose of the study, the following research questions were considered to aid the study:

1. What is the current scope and design of non-formal agricultural skills acquisition programmes available to rural youths in Rivers State?
2. What are the effects of non-formal agricultural skills acquisition programmes on youth livelihood outcomes (employment, agribusiness start-ups, income generation, and social inclusion) in Rivers State?
3. What are the major barriers and enabling factors influencing the effectiveness of non-formal agricultural skills acquisition programmes in empowering rural youths for inclusive societal development in Rivers State?

Research Hypotheses

The following null hypothesis was postulated to guide the study:

1. There is no significant difference in the mean responses of rural youths and programme facilitators on the scope and design of non-formal agricultural skills acquisition programmes in Rivers State.

2. There is no significant difference in the mean responses of rural youths and programme facilitators on the effects of non-formal agricultural skills acquisition programmes on livelihood outcomes in Rivers state.
3. There is no significant difference in the mean responses of rural youths and programme facilitators on the barriers and enabling factors influencing the effectiveness of non-formal agricultural skills acquisition programmes in Rivers State.

Methodology

The study was carried out in Rivers State, located in the Niger Delta region of Nigeria. Rivers State is bounded by Abia and Imo States to the north, Akwa Ibom to the east, Bayelsa and Delta to the west, and the Atlantic Ocean to the south. The state is largely rural with fertile land and water bodies, making agriculture one of its major occupations, despite oil exploration. However, youth unemployment, environmental degradation, and poor access to formal training have constrained agricultural productivity. Non-formal agricultural training programmes are being introduced by government, NGOs, and community-based organizations to empower rural youths and foster inclusive development. The study adopt a descriptive survey research design.

The target population of the study consists of rural youths (aged 18–35) who have participated in non-formal agricultural skills acquisition programmes across selected Local Government Areas (LGAs) in Rivers State, hence the study population consists of 200 which comprises of 85 females and 115 males selected from the six LGAs in Rivers State where agricultural skills programmes are active. Facilitators (trainers, agricultural extension officers, and programme coordinators) working with these youths, A multistage sampling technique was employed, the Instrument for Data was a self-structured questionnaire designed in a 4-point Likert-type rating scale used to elicit responses: Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2, Strongly Disagree (SD) = 1. The high-level rating scale capture the perceptions of respondents on the scope, effects, and challenges of non-formal agricultural skills acquisition programmes.

Validation of Instrument, The questionnaire was subjected to content and face validation by three experts: One expert in Agricultural Education, expert in Measurement and Evaluation, and expert in Educational Research, all from Rivers State University. Their corrections and suggestions will be incorporated to improve the instrument, the reliability of the instrument was tested using the test–retest method and a reliability coefficient of 0.70 above was considered acceptable for the study, Data was analyzed using Mean and Standard Deviation with a criterion mean value of 2.50 was serve as the benchmark for decision-making (since $4 + 3 + 2 + 1 = 10 \div 4 = 2.50$) while The Z-test was used to test the null hypotheses at 0.05 level of significance.

Results

Research Question 1

What is the current scope and design of non-formal agricultural skills acquisition programmes available to rural youths in Rivers State?

Table 1: Mean Responses of Male and Female Participants on the Scope and Design of Non-Formal Agricultural Skills Acquisition Programmes (N = 200)

		Male (n=115)	Female (n=85)		
S/N	Statements	Sex	Mean	SD	Decision
1	The programmes cover crop production and animal husbandry skills.	Male	3.20	0.81	Accepted
		Female	3.10	0.77	
2	Non-formal training includes agribusiness and entrepreneurship modules	Male	3.05	0.84	Accepted
		Female	2.95	0.80	
3	Training methods used are participatory and practical (hands-on).	Male	3.15	0.79	Rejected
		Female	3.00	0.83	
4	The duration of the training is adequate for skill acquisition.	Male	2.40	0.90	Rejected
		Female	2.35	0.92	
5	The training is linked to follow-up services such as extension and mentoring	Male	2.50	0.88	Rejected
		Female	2.45	0.85	
Grand Mean			2.86	2.82	Accepted

Source: field work 2025

The results in Table 1 show that respondents generally agreed that the programmes cover crop and animal production skills, include entrepreneurship modules, and use participatory training methods (means ≥ 3.00). However, the respondents disagreed that the duration of training is adequate and that programmes are linked to follow-up services such as extension and mentoring (means < 2.50). The overall grand mean of 2.82 indicates that, though scope and design are fairly adequate, gaps exist in training duration and post-training support.

Research Question 2

What are the effects of non-formal agricultural skills acquisition programmes on youth livelihood outcomes (employment, agribusiness start-ups, income generation, and social inclusion) in Rivers State?

Table 2: Mean Responses of Male and Female Participants on the Effects of Non-Formal Agricultural Skills Acquisition Programmes (N = 200)

		Male (n=115)		Female (n=85)		
S/N	Statements	Sex	Mean	SD		Decision
1	The programme has improved youth employment opportunities	Male	3.18	0.82		Accepted
		Female	3.05	0.85		
2	Beneficiaries are more engaged in agribusiness start-ups	Male	3.05	0.84		Accepted
		Female	2.95	0.88		
3	Participation in the training has improved income generation among youths.	Male	2.95	0.87		Accepted
		Female	3.00	0.82		
4	The programme has enhanced the social inclusion of rural youths in communities.	Male	3.10	0.80		Rejected
		Female	3.05	0.79		
5	Training outcomes are sustained beyond the programme duration	Male	2.45	0.89		Rejected
		Female	2.40	0.91		
Grand Mean			2.95		2.92	Accepted

Source: field work 2025

Table 2 indicates that respondents agreed that the programme improves employment, agribusiness start-ups, income, and social inclusion (means between 2.95–3.18). However, they disagreed that training outcomes are sustained beyond programme duration (mean = 2.43). The overall grand mean of 2.92 shows that the programmes positively affect livelihoods, though sustainability remains a challenge.

Research Question 3

What are the major barriers and enabling factors influencing the effectiveness of non-formal agricultural skills acquisition programmes in empowering rural youths in Rivers State?

Table 3: Mean Responses of Male and Female Participants on Barriers and Enabling Factors (N = 200)

		Male (n=115)		Female (n=85)	
S/N	Statements	Sex	Mean	SD	Decision
1	Lack of access to credit facilities limits the effectiveness of the programme	Male	3.30	0.76	Accepted
		Female	3.20	0.80	
2	Inadequate extension and mentorship support hinder programme outcomes	Male	3.18	0.82	Accepted
		Female	3.05	0.85	
3	Environmental challenges (oil pollution, poor soils) affect training outcomes.	Male	3.10	0.84	Accepted
		Female	3.00	0.83	
4	Gender inequality reduces equal access to training opportunities.	Male	2.40	0.90	Rejected
		Female	2.50	0.88	
5	Government and NGO support serve as strong enabling factors for the programme.	Male	3.05	0.83	Accepted
		Female	3.00	0.79	

Grand Mean**3.01****2.98****Accepted****Source: field work 2025**

Table 3 shows that both male and female respondents agreed that lack of credit, weak extension services, and environmental challenges are major barriers, while government/NGO support acts as an enabling factor (means ≥ 3.00). However, gender inequality was not strongly perceived as a barrier (mean = 2.45). The overall grand mean of 2.98 suggests that barriers are significant, but external support can enhance programme effectiveness.

Hypotheses Testing**Hypothesis 1**

There is no significant difference between the mean responses of male and female participants on the availability and scope of non-formal agricultural skills acquisition programmes in Rivers State.

Table 4: Z-test Analysis on Mean Responses of Male and Female Participants for Research Question 1

Category/Group	N	$\bar{X}$	SD	Df	z-cal	z-crit	α	Decision
Male	115	3.02	0.84	198	1.25	± 1.96	0.05	Reject H_{01}
Female	85	2.95	0.81					

Z-critical at $\alpha = 0.05$ (2-tailed) = ± 1.96

Since Z-cal (1.25) < Z-crit (± 1.96) $\rightarrow$ Fail to reject H_0

The result shows no statistically significant difference between male and female respondents on the availability and scope of non-formal agricultural skills acquisition programmes. This implies that both genders perceive the accessibility and scope of the programmes in a similar way.

Hypothesis 2

There is no significant difference between the mean responses of male and female participants on the effect of non-formal agricultural skills acquisition programmes on rural youth empowerment in Rivers State.

Table 5: Z-test Analysis on Mean Responses of Male and Female Participants for Research Question 2

Category/Group	N	$\bar{X}$	SD	Df	z-cal	z-crit	α	Decision
Male	115	3.20	0.86	198	1.45	± 1.96	0.05	Reject H_{02}
Female	85	3.10	0.82					

Z-critical = ± 1.96

Z-cal (1.45) < Z-crit (± 1.96) $\rightarrow$ Fail to reject H_0

There is no significant difference between male and female respondents on the effect of non-formal agricultural skills acquisition programmes on rural youth empowerment. This implies that both genders agree that the programmes promote empowerment and inclusion.

Hypothesis 3

There is no significant difference between the mean responses of male and female participants on the challenges/barriers to implementing non-formal agricultural skills acquisition programmes in Rivers State.

Table 6: Z-test Analysis on Mean Responses of Male and Female Participants for Research Question 3

Category/Group	N	$\bar{X}$	SD	Df	z-cal	z-crit	α	Decision
Male	115	2.85	0.84	198	1.30	± 1.96	0.05	Reject H_{03}
Female	85	2.75	0.84					

Z-cal (1.30) < Z-crit (± 1.96) $\rightarrow$ Fail to reject H_0

There is no significant difference between male and female respondents on the perceived challenges/barriers to non-formal agricultural skills acquisition programmes. Both genders similarly identified constraints such as inadequate funding, poor infrastructure, and limited follow-up services.

Discussion of Findings

Research Question 1: Availability and Scope of Non-formal Agricultural Skills Acquisition Programmes
The findings revealed that both male and female participants agreed that non-formal agricultural skills acquisition programmes in Rivers State cover core areas such as crop and livestock production, agribusiness, and entrepreneurship, and employ participatory training methods. However, the respondents disagreed on the adequacy of training duration and follow-up services. This aligns with Okoro and Nwankwo (2019), who noted that most rural training initiatives in Nigeria are poorly structured and lack sustainability mechanisms. Similarly, Adebayo (2020) emphasized that inadequate mentoring and extension services undermine the long-term benefits of agricultural training for rural youths.

Research Question 2: Effect of Non-formal Agricultural Skills Acquisition Programmes on Rural Youth Empowerment

The study showed that both genders agreed that such programmes positively impact youth empowerment by improving skills, income opportunities, and self-reliance. This finding

corroborates Eze and Onyekuru (2021), who found that vocational and non-formal agricultural training enhances rural employment and reduces youth restiveness. Likewise, Adesoji & Oladele (2022) affirmed that skills acquisition equips youths with entrepreneurial capacity, thereby promoting inclusive rural development.

Research Question 3: Challenges/Barriers to Implementation

The findings also showed that male and female respondents identified similar challenges such as insufficient funding, poor infrastructure, lack of modern equipment, and weak institutional support. These results are consistent with Chukwudi (2018), who argued that poor policy support remains a critical barrier to agricultural empowerment initiatives. Ololade and Ajayi (2023) also highlighted infrastructural deficits and low government commitment as key obstacles to achieving sustainable agricultural youth programmes.

Conclusion

From the results of the research, the study concluded that non-formal agricultural skills acquisition programmes in Rivers State play a vital role in empowering rural youths and fostering inclusive society by providing them with practical agricultural and entrepreneurial skills. However, gaps exist in the adequacy of training duration, follow-up mentoring, and infrastructural support. Despite these challenges, the programmes are generally perceived as beneficial and impactful by both male and female participants.

Recommendations

From the conclusion, the study recommends that

1. Strengthen Programme Design – Training should include structured mentoring, extension follow-ups, and longer durations to ensure effective skills transfer.
2. Increase Funding and Infrastructure – Government and NGOs should allocate more resources to modern training facilities, equipment, and materials.
3. Gender-Inclusive Policies – Stakeholders should ensure both male and female youths have equal access to training opportunities.
4. Capacity Building for Trainers – Regular refresher courses should be organized for facilitators to keep them updated with innovative agricultural practices.
5. Public-Private Partnerships (PPP) – Collaboration between government, private sector, and community-based organizations should be enhanced to scale up non-formal agricultural skills acquisition programmes sustainably.

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