

AWARENESS AND UTILIZATION OF AGRICULTURAL ENHANCEMENT STRATEGIES AND ADULT EDUCATION FOR SUSTAINABLE COMMUNITY DEVELOPMENT IN BAYELSA STATE

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ABSTRACT: *This paper assessed the level of awareness and utilization of agricultural enhancement strategies and adult education for sustainable community development in Bayelsa State. A descriptive survey research design was adopted for the study. Two research questions were formulated to guide the study. The population of study comprised of all adults engaged in agricultural activities in the eight LGA in Bayelsa state. A total of 509 farmers formed the sample of the study. Agricultural Enhancement Strategies for Sustainable Development Questionnaire” (AESSDQ) developed by the researcher was used for data collection. The instrument was validated by experts of measurement and evaluation and adult and community development experts. It was subjected to pilot testing and the outcome was analyzed using Cronbach Alpha Formula which yielded a coefficient value of 0.80. One-on-one mode of questionnaire administration was adopted and 100% return rate was achieved. Mean and standard deviation were used to answer the research questions, while t-test statistics was used to test the hypotheses at 0.05 level of significance. Results revealed that the level of awareness and the extent of utilization of agricultural enhancement strategies for sustainable community development among farmers who attends adults’ education programme is higher than those who does not attend adult education programme. It was recommended amongst others that Adult education should be given more attention than it already has as a veritable tool for promoting sustainable community development.*

KEYWORDS: awareness, utilization, agricultural enhancement strategies, adult education, sustainable community development

INTRODUCTION

Agricultural science in general is linked with the development of any nation in the world. Agricultural science as a vocation and discipline opens and shuts more doors for men and women than any other content area. Agriculture was truly the most important economic sector in Nigeria, which accounted for the highest source of provider of employment, highest contributor to gross domestic product and foreign exchange earnings (Nwangwu, 2019). Regardless of the importance of agricultural sector to the development of any nation, the sector has continue to face significant challenges. These challenges ranges from the outdated land tenure system that constrains access to land, a very low level of irrigation development, limited access to research findings and technologies, high cost of farm inputs, poor access to credit, inefficient fertilizer procurement and distribution, inadequate storage facilities and poor access to markets (Nwangwu, 2019). Charles-Owaba (2020) reported that there is a serious lack of awareness and under-utilization of the potentials in the Agricultural sector by citizens,

especially the youths in Nigeria generally, but Bayelsa precisely. He further noted that most youths in Bayelsa see farming as a low class task, hence they hunt for white collar jobs, thereby making the state to depend on other states for supply of agricultural produce.

Research reports have revealed some of the reasons for the challenges faced by the Agricultural sector in the face of the projects launched by different governments at various tiers. Olufemi (2019) reported that lack of visionary leadership, incompetence, policy somersault, a complete absence of project follow-through, a propensity to divert public funds and resources into private use, and lack of a strong commitment to find a sustainable way to provide small scale rural farmers access to seeds, fertilizer, small-scale irrigation and credit. Also, Kolawole (2014) observed that lack of functional adult education programmes is a major reason behind the non-implementation of agricultural policies. He further noted that most agricultural programmes and policies meant for national development and transformation were not successful, in spite of quantum of money that had been invested, because they were all in-school in nature and design, which does not accommodate post-school activities such as adult and non-formal education.

In a bid to curb these challenges subsequent government at various tiers, have launched different strategies in the sector. Some of these strategies are; Operation Feed the Nation (OFN), School to Land Programme (SLP), Nigerian Agricultural Transformation Agenda (NATA), Nigerian Incentive-based Risk Sharing System for Agricultural Lending (NIRSAL), Nigerian Strategy Support Programme (NSSP), Anchor Borrower Programme (ABP) and Economic Recovery and Growth Plan (ERGP). Also, researchers have focused attention on how to improve Agricultural activities in Nigeria: Olufemi (2019) reviewed the nature of agribusiness in Nigeria in order to identify constraints and inherent risks and challenges, and more importantly identify what drives the development of the sector. The paper through a review of literature and government policies and initiatives identified transformers to include need to ensure sustainable food security and make the country competitive in food production, diversify the revenue base, generate employment, reduce government involvement and high incidence of poverty in rural areas. To this effect the paper reiterated that strategies should be put in place to recruit more agropreneurs, de-risk and guarantee descent incomes and livelihood for actors in the industry, empowers marginal farmers to get out of subsistence, and provide major actors with information and knowledge to enable them produce for the market. The paper concluded that the most promising way to sustain the transformation is to make government supports, policies and private sector investments that will ensure mass production of basic commodities needed to address market demands and ensure agribusiness sustainability.

Nwangwu (2019) looked at some of the PPP programmes that have been initiated by the government with particular focus on the provision of services, infrastructure, sustainable land use systems and the development of structured markets. The paper evaluated the impact of these programmes and also suggest improvements that will ensure that agriculture PPPs are further enhanced in Nigeria.

Akpomedaye (2019) carried out a study in 'order to determine the strategies of agricultural extension to boost food production in Nigeria. The findings from the study shows that agricultural extensions have contributed positively towards the welfare of rural farmers such

as increase in food productivity, help farmers to adopt new technology and innovations systems, help to raise farmers' income and improve farmers' literacy. Although there are many problems militating against the delivery of agricultural extension service such as- poor communication skill, late adopters and never adopters, transportation problem and lack of finance. It was recommended among others that: Farmers should be provided with adequate education to equip them properly on the use of fungicides, insecticides, fertilizers etc; Farmers should be made to have positive attitude towards agriculture; Extension agents should be trained and be funded, so that farmers problems can easily be executed and boost food production; and local farmers should be involved in decision making.

The issue on how to improve agricultural activities has been comprehensively studied, but almost no research has been conducted to compare how adult education can help farmers harness the potentials in the agricultural sector for sustainable community development. Therefore, this study is aimed at comparing the level of awareness and the extent of utilization of agricultural enhancement strategies for sustainable development among rural farmers who attends adult education programmes and those who does not in Bayelsa state.

Purpose of Study

The main purpose of this study is to investigate agricultural enhancement strategies and adult education program for sustainable community development in Bayelsa State. Specifically, the study achieved the following:

- i. To determine the level of awareness of Agricultural enhancement strategies for community development in Bayelsa State.
- ii. To determine the extent of utilization of Agricultural enhancement strategies for sustainable community development in Bayelsa state.

Research Questions

The following research questions were formulated to guide the study:

1. What is the level of awareness of Agricultural enhancement strategies for sustainable community development in Bayelsa State among farmers attending adult education programmes and those not attending?
2. To what extent are the agricultural enhancement strategies utilized for sustainable community development in Bayelsa State among farmers attending adult education programmes and those not attending?

Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance:

HO1: There is no significant difference between mean response of respondents involved in adult education program and those not on the level of awareness of agricultural enhancement strategies for sustainable community development in Bayelsa State.

HO2: There is no significant difference between mean response of respondents involved in adult education program and those not on the extent of utilization of Agricultural enhancement strategies for sustainable community development in Bayelsa state.

METHODOLOGY

Descriptive survey design was adopted for this study. The population comprised of all adults engaged in agricultural activities in the eight LGA in Bayelsa state. A purposive sampling technique was used to select 3 LGAs, one from each senatorial district in the state. The list of various farming organizations' registered with LGA Agricultural Development Board was obtained from which the respondents were selected via random sampling technique by balloting. A total of 504 farmers formed the sample of the study. Instrument for data collection was a structured questionnaire tagged as "Agricultural Enhancement Strategies for Sustainable Development Questionnaire" (AESSDQ) developed by the researcher. The instrument was a structured 16-item questionnaire divided into four (3) sections. Section A solicits the demographic information of the respondents, Section B was on the available strategies, and Section C was on the extent to which the strategies are utilized. The instrument was validated by experts of measurement and evaluation and adult and community development experts. It was subjected to pilot testing and the outcome was analyzed using Cronbach Alpha Formula which yielded a coefficient value of 0.80. One-on-one mode of questionnaire administration was adopted and 100% return rate was achieved. Mean and standard deviation were used to answer the research questions, while t-test statistics was used to test the hypotheses at 0.05 level of significance. Mean values of 2.50 and above were considered high extent, while the values below 2.50 were considered low extent.

Literature Review

Conceptual Framework

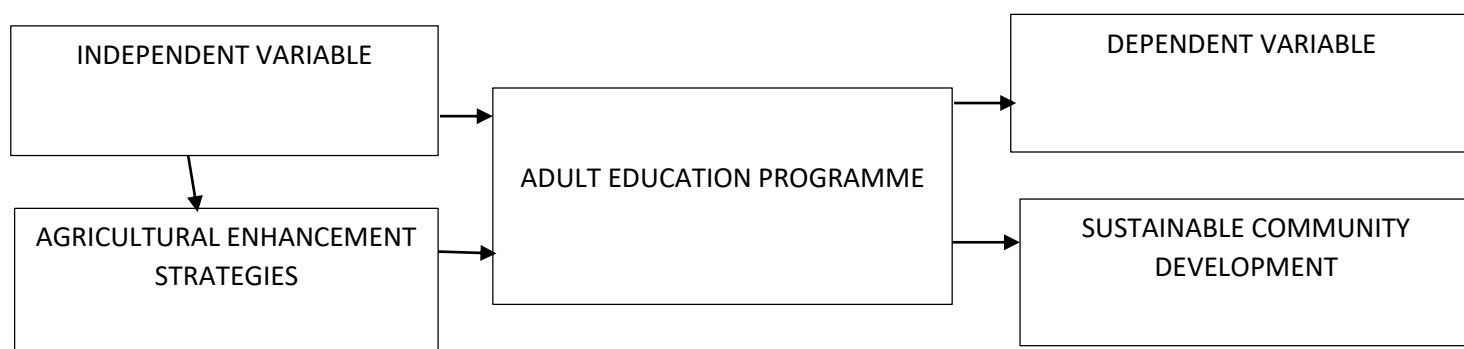


FIGURE 1: SCHEMATIC DIAGRAM SHOWING VARIABLES OF THE STUDY

Adult Education

The concept of adult education has been faced with hydra-headed definition. It becomes difficult to hinge it on a singular universal definition. In the view of Houle (1972), adult education is a process by which men and women (alone, in groups of institutional settings) seek to improve themselves or their society by increasing their skill, their knowledge or their sensitiveness; any process by which individuals, groups or institutions try to help men and women improve in these ways. Merriam (1982) in Olori (2012) defined adult education as

concerned with preparing people for life, but more specialty, with helping people to live more successfully. However, the most comprehensive and embracing is UNESCO's definition which sees adult education as: "the entire body of organized educational process, whatever they prolong or replace initial education in schools, colleges and universities as well as in apprenticeship whereby persons regarded as adult by the society to which they belong develop their abilities, enrich their knowledge, improve their technical or professional qualifications and bring about changes in the two fold perspective of full personal development and participation in balanced and independent social, economic and cultural development.

A cursory look into the above definition reveals that the following attributes of adult education are deducible:

- There is flexibility of content
- It is a continuous process.
- It considers both individual and groups.
- Adult education also is remedial in nature.
- Its methodology recognizes human dignity and.
- It is change oriented.

Adult education is therefore, an educational activity which individuals undertake in order to improve their social and economic conditions for the overall benefits of society. The gain of the process has a ripple effect. It benefits the individual(s) and transcends to the entire society.

Sustainable Community Development

Sustainable Development is development that meets the needs of the present generation of a particular country or community without compromising the ability of future generations to meet their own needs. (Ihejirika, 2007) Its outcome becomes not only enduring but regenerative. The Shell Petroleum Development Company of Nigeria limited (2010) defines sustainable Community Development as the strategic planning and application of available resources (material, funds and manpower) to improve capacity of community to generate and sustain socio economic projects health and quality of life. Sustainable community Development in the International Journal for Rural Studies (2010) is the ability to make choices which respect the relationship between the three (Economy, Ecology and Equity).

Economy: Economic activities should serve the common good, be self-renewing and build local assets and self-reliance.

Ecology: Humans are part of nature which has its limits and communities are responsible for protecting and building natural assets.

Equity: This suggests full participation in activities, benefits and decision making of a society. The journal further defines Sustainable Community Development to mean love and respect for land, care for and nurture the land so it can give back all we need to sustain life for ourselves and our future generation.

The Northwest Policy Institute (2004) defines Sustainable Community Development as to foster commitments, to promote vitality, build resilience to stress, act as steward and forge

connection beyond the community. Sustainable community Development involves long term prospect for continuous existence.

In a sustainable community, resource consumption is balanced by resources assimilated by the ecosystem. The sustainability of a community is determined by the web of resources providing its food, fibre, water and energy needs and by the ability of natural system to process its waters. A community is unsustainable if it consumes resources faster than they can be renewed, produces more wastes than natural system can process or relies upon distance sources for its basic needs.

RESULTS AND DISCUSSION

Results

Research Question 1

What is the level of awareness of Agricultural enhancement strategies for sustainable community development in Bayelsa State among farmers attending adult education programmes and those not attending?

Table 1: Mean and standard deviation of responses on level of awareness of Agricultural enhancement strategies for sustainable community development

S/ N	ITEMS	AAE=204			NAAE=300		
		X ₁	S.D ₁	REMA RK	X ₂	S.D ₂	REMA RK
1	Establishment of entrepreneurship development centre	2.74	0.501	A	2.04	0.501	NA
2	Sensitization, advocacy and mobilization of support for adults	3.50	1.02	A	2.40	1.02	NA
3	Promotion of science, technology and innovation by providing incentives for students and lecturers	2.06	0.43	NA	2.06	0.43	NA
4	Set-up of the Growth Enhancement Scheme (GES) to register small holder farmers and provide targeted input subsidies (E-Wallet)	3.89	1.19	A	3.09	1.19	A
5	Promotion of links with the private sector through research, consultancy, training as	2.60	0.79	A	2.50	0.79	A

	building networks and alliances							
6	improved access to inputs i.e. access to fertilizer and of seeds	2.69	0.89	A	2.19	0.89	NA	
7	Set up of Nirsal credit guarantees	3.25	1.03	A	3.45	1.03	A	
8	Creation of special funds to support farmers e.g. N10B Cassava Fund and FAFIN/KfW Facility of \$35M	3.09	0.99	A	3.00	0.99	A	
9	Concession of Federal warehouses and storage assets	2.79	0.66	A	2.39	0.66	NA	
10	Introduction of new higher yielding crop varieties e.g. Cocoa, Rice (Faro 42 and 44)	2.43	0.83	NA	2.13	0.73	NA	
11	Re-establishment of select commodity marketing boards e.g. Cocoa Marketing Corporation	2.04	0.501	NA	2.04	0.501	NA	
12	Sensitization, advocacy and mobilization of support for entrepreneurship education	3.50	1.02	A	3.0	1.02	A	

Source: Fieldwork (2021). *A=Aware, NA=Not Aware AAE=Attending Adult Education, NAAE=Not Attending Adult Education

The table above shows the mean response of respondents on the level of awareness of Agricultural enhancement strategies for sustainable community development in Bayelsa State. For respondents in AAE group the results revealed that farmers are aware of items 1, 2, 4, 5, 6, 7, 8, 9 and 12 since their mean values are above the criterion mean value of 2.50. Farmers are not aware of items 3, 10 and 11 since their mean values are below the criterion mean value of 2.50. For respondents in NAAE group the results revealed that the farmers are aware of items 4, 5, 7 and 8 since their mean values are above the criterion mean value of 2.50. Farmers are not aware of items 1, 2, 3, 6, 9, 10 and 11 since their mean values are below the criterion mean value of 2.50. This implies that the level of awareness of agricultural enhancement strategies among farmers attending adult education programmes is higher than those not attending.

Research Question 2

To what extent are the agricultural enhancement strategies utilized for sustainable community development in Bayelsa State among farmers attending adult education programmes and those not attending?

Table 2: Mean and standard deviation of responses on the extent to which Agricultural enhancement strategies utilized for sustainable community development

AAE=204		NAAE=300					
S/ N	ITEMS	X ₁	S.D ₁	REMA RK	X ₂	S.D ₂	REMA RK
1	Establishment of entrepreneurship development centre	2.66	0.462 61	HE	2.25	0.462 65	HE
2	Sensitization, advocacy and mobilization of support for adults	2.92	0.474 49	HE	2.62	0.468 76	HE
3	Promotion of science, technology and innovation by providing incentives for students and lecturers	3.50	0.512 86	HE	3.21	0.469 83	HE
4	Set-up of the Growth Enhancement Scheme (GES) to register small holder farmers and provide targeted input subsidies (E-Wallet)	2.50	0.499 58	HE	2.45	0.524 23	LE
5	Promotion of links with the private sector through research, consultancy, training as building networks and alliances	2.97	0.472 13	HE	2.19	0.468 76	LE
6	improved access to inputs i.e. access to fertilizer and of seeds	2.31	0.481 11	LE	2.61	0.468 7	LE
7	Set up of Nirsal credit guarantees	3.39	0.481 11	HE	2.26	0.397 9	LE
8	Creation of special funds to support farmers e.g. N10B	2.66	0.462 61	HE	2.25	0.462 65	HE

	Cassava Fund and FAFIN/KfW Facility of \$35M							
9	Concession of Federal warehouses and storage assets	2.92	0.474 49	HE	2.62	0.468 76	HE	
10	Introduction of new higher yielding crop varieties e.g. Cocoa, Rice (Faro 42 and 44)	2.63	0.499 58	HE	3.21	0.469 83	HE	
11	Re-establishment of select commodity marketing boards e.g. Cocoa Marketing Corporation	2.97	0.472 13	HE	2.45	0.524 23	LE	
12	Sensitization, advocacy and mobilization of support for entrepreneurship education	2.31	0.481 11	LE	2.19	0.468 76	LE	

Source: Fieldwork (2021) *LE=Low Extent, HE=High Extent

For respondents in AAE group the results revealed that the mean value of items 1, 2, 3, 4, 5, 7, 8, 9, 10 and 11 were above the criterion mean of 2.50, while items 6 and 12 have mean values below the criterion mean of 2.50. For respondents in NAAE group the results revealed that the mean value of items 1, 2, 3, 8, 9 & 10 were above the criterion mean of 2.50, while items 4, 5, 6, 7, 11 and 12 have mean values below the criterion mean of 2.50.

Testing Hypotheses

HO1: There is no significant difference between mean response of respondents involved in adult education program and those not on the level of awareness of agricultural enhancement strategies for sustainable community development in Bayelsa State.

Table 4.5: t-test analysis on hypothesis 1

Category	N	Mean	St.D	df	P	t _{cal}	t _{crit}	Decision
AAE'	204	3.35	0.47	502	0.05	2.283	1.960	Reject Ho ₁
NAAE'	300	2.58	0.57					

Source: Fieldwork (2021)

From Table 3 above, the calculated t-value is 2.283 at 502 degree of freedom and 0.05 level of significance. Since the calculated t-value of 2.283 is greater than the critical table value of 1.96, the null hypothesis is rejected. In other words, there is a significant difference between mean

response of respondents involved in adult education program and those not on the level of awareness of agricultural enhancement strategies for sustainable community development in Bayelsa State.

HO2: There is no significant difference between mean response of respondents involved in adult education program and those not on the extent of utilization of Agricultural enhancement strategies for sustainable community development in Bayelsa state.

Table 4: t-test analysis on hypothesis 2

Category	N	Mean	St.D	df	P	t _{cal}	t _{crit}	Decision
AAE	204	3.32	0.47	502	0.05	2.730	1.960	Reject H ₀₂
NAAE	300	2.34	0.48					

Source: Fieldwork (2021)

From Table 4 above, the calculated t-value is 2.730 at 502 degree of freedom and 0.05 level of significance. Since the calculated t-value of 2.730 is greater than the critical table value of 1.96, the null hypothesis is rejected. In other words, there is a significant difference between mean response of respondents involved in adult education program and those not on the extent of utilization of Agricultural enhancement strategies for sustainable community development in Bayelsa state.

DISCUSSION OF FINDINGS

The results in research question 1 revealed that the level of awareness of agricultural enhancement strategies among farmers who attends adults' education programme is higher than those who does not attend adult education programme. The result from hypothesis 1 indicated that the difference in their level of awareness was significant. The results in research question 2 revealed that the extent to which agricultural enhancement strategies are utilized among farmers who attends adults' education programme is higher than those who does not attend adult education programme. The result from hypothesis 2 indicated that the difference in the extent to which they utilize of agricultural enhancement strategies was significant. These findings is in line with Kolawale (2014), Nwangwu (2019) and Olufemi (2019, who reported that adult and other forms of non-formal education are pre-requisites for effective agricultural extension service system in Nigeria.

CONCLUSION

The study has established that the level of awareness and the extent of utilization of agricultural enhancement strategies for sustainable community development among farmers who attends adults' education programme is higher than those who does not attend adult education programme.

Recommendation

Based on the conclusion, the following recommendations are made:

- 1) Adult education should be given more attention than it already has as a veritable tool for promoting sustainable community development.
- 2) Community members should be effectively involved in project identification process and implementation to enhance sustainability especially the ones that has to do with agricultural enhancement strategies.
- 3) Government should endeavour to consolidate on the gains of adult education programmes by considering additional budgetary allocations and partnership with NGOs to promote the scheme, ensure sustainability and reduce poverty level.

References

- Akpomedaye, J. F. O. Agricultural Extension as a Strategy to Boost Food Production in Nigeria. In *Middle-East Journal of Scientific Research* 3 (3): 145-148
- Charles–Owaba, T. (2020). Mobile App and mathematics education; awareness and barriers. *Journal of Assertiveness in science and mathematics Education*, 11(2), 90-98
- Ihejirika, J. (2012). *Anatomy of adult Education*. Port Harcourt: Uniport Press.
- International Journal for Rural Studies (IJRS) Org.uk/Urs. Accessed on 1/14/2010
- Kolawole, C. O. (2014). Curriculum issues and national transformation: Beyond 21st Century in Nigeria. A lead paper presented at 3rd National Conference of Emmanuel Alayande College of Education, Oyo, Nigeria, between 17th and 20th February, 2014.
- Nwangwu, G., (2019). Improving agriculture in Nigeria through public-private partnerships. *African Journal of Business Management* 13(8), 256-263.
- Olori, C. N. (2012). Concept, meaning and scope of adult education. In Amadike, N. N. F. and Ubong, B. (eds), *Issues in Adult Education*. Port Harcourt: Harey Publications.
- Olufemi, A. O., (2019). Sustaining Agricultural Transformation in Nigeria: Challenges, Issues and Strategies. *International Journal of Innovative Agriculture & Biology Research* 7(4):13-22
- The Northwest Policy Institute (2004)
- The Shell Petroleum Development Company of Nigeria Limited (2010).