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Role of Agricultural Science in Promoting the Socio-Economic Development of Ahoada East Local Government Area, of Rivers State

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ABSTRACT
The purpose of this study is to find out the role of agricultural science in promoting the socio-economic development of Ahoada East Local Government Area of Rivers State. Sample size for the study was 186 respondents, comprising of 10 agricultural science teachers and 176 agricultural science students. Purposive sampling technique was adopted to choose the whole population since the population is a manageable size. Four research questions guided the study, the instrument for data collection was a structured questionnaire 'titled Role of Agricultural Science in Promoting the Socio-Economic Development Questionnaire' (RASPSEDQ). Mean and standard deviation was used to analyse the research questions. Some of the major findings of the study include, basic instructional materials and facilities needed for the teaching and learning of agricultural science were not available and the few available ones are not functional. Students tend to develop negative attitude towards agricultural science due to crude implement use in farming by the peasant farmers. The paper recommended that if agricultural science is to contribute to the socio-economic development of Ahoada East Local Government Area, functional instructional facilities should be provided to improve teaching and learning.
Keywords: Role, Agricultural Science, Promoting, Socio-Economic, Development.

INTRODUCTION

Nigeria has steadily witnessed considerate worsening social and economic conditions, both that of the country and her citizens, despite its huge physical and human resources (Okumadewa, 2001). The level of poverty, unemployment and crime in Nigeria is predominantly higher in the rural areas than urban areas of the country according (Etim, 2007). Nigeria like most developing countries is facing various challenges like social, political and economic problems, and there is lack of functional instructional materials and facilities in the secondary schools. This affects the quality of education and practical knowledge to drive the economy forward (Dike, 2015). As at present, the situation poses a serious threat and challenge to both government and well-meaning citizens of the country.

Unemployment has become a major problems bedeviling the lives of Nigeria youth and adults causing frustration, dejection and this has contributes to the high of rate of poverty, insecurity and crime in the country (Ajufo, 2013). It is common in Nigeria that many graduates from the universities find it very difficult to get employment. This is partly due to the curricula of the universities and other tertiary institutions which according to Osibanjo, (2006) lay more emphasis on training for white collar jobs. The

socio-economic situation in Nigeria poses serious threat to both the citizens and government of the nation. The unemployment problem further calls for different strategies and actions for it to be ameliorated.

Education is a fundamental tool in the socio-economic development of any nation. One of the important concerns of education is to ensure that each student is able to make use of the knowledge, ability and skills taught, which will enable him/her perform well and contribute to the development of the society. Educational programmes across the world require adequate supports to be meaningful. Every nation offers education to its citizens, but what matters most is how relevant each education is to the needs of the society (Akaninwor, 2017). It is believed that the quality of a nation's education is proportional to the level of its prosperity. A good educational system is a strong base for technological development it equips people with knowledge and skills for designing methods and process that will enable them to make maximum use of their natural resources for the benefit of the society.

The development of a nation also depends mostly on agriculture to this effect, the teaching of agricultural science in secondary schools is aimed at producing citizens with skill, competencies and reasoned judgment to successfully live and add meaningfully to the economic growth of Nigeria (Amadi & Lazarus, 2017). Nigeria as a country is still in its developing stage, the development may not start from all the states at once, a state who is ready to grow and stand tall among other states will actually require its resources to be harnessed and will continue to seek improvement in its educational sector most especially in the aspect of agriculture as this will affect other sectors in the state.

The study of agriculture should be encourage, this will help solve problems regarding hunger, health issues related to food and will provide employment for the growing population of the nation. Agricultural science as asserted by Nnodim & Johnwest (2016) offers numerous opportunities for youths to be economically and socially empowered, but required skills to be efficient and productive.

Agricultural science is essential not only to shape the mindset of young people but also that of the adult, that will provide the skill and knowledge that are central to developing an agricultural culture. Agricultural science provides students with knowledge and skills essential for launching a successful agricultural enterprise (Cho, 1998). It is vital that agriculture is addressed from an early age and up into higher level of education such as in the polytechnics and universities, it should be made available to all students regardless of choice of study or occupation to enhance development, not only for student but also for the society.

The relationship between education and socio-economic development has been established, such that education is internationally accepted as the bedrock of development. The importance of education cannot be overemphasized, it is a fundamental human right, hence the need for agriculture in the educational system. According to Dike (2015), the nation's educational system and that of the economy must align to make a difference in the life of the people.

Statement of the Problem

The need of this study emanates from the fact that in Nigeria's rural a areas (Rivers State inclusive) there is high rate of unemployment, low income and productivity, poor storage facilities for harvested agricultural produce, poor infrastructure. These factors have consequently led to increase in rural-urban migration, kidnapping, killing, social unrest and high crime rate, thus making the rural socio-economic development and growth stagnant and redundant and the urban areas vulnerable to increased insecurity (Ojimba, Tasic and Wilcox, 2018). It is surprising that despite the effort of the government, non-governmental agencies and even individuals in enhancing the of development of education in Rivers State, especially in Ahoada East According to Nnamdi (2006), the availability of schools determines the level of access to education of the citizens. It is no longer news today that most people involved in criminal activities fall into the youth age bracket and this is negatively affecting the socio-economic development of the country and even keeping Nigeria as one of the world poorest countries.

The empowerment of young people in Nigeria as at today should be everybody's business, which includes the government, inter-governmental and non-governmental organization, private sectors, family and the community (Ojo, Abayemi and faith, 2014). Neil (2003) said that there had been less emphasis on the study of agriculture in primary and secondary schools curricula. Most youth lack knowledge on

agriculture and have narrow perception of associated career opportunities. Therefore the problem of the study is what are the roles of agricultural science in promoting the socio-economic development of Ahoada East Local Government Area of Rivers State?

Purpose of the Study

The main purpose of this study is role of agricultural science in the socio-economic development in Ahoada East Local Government Areas of Rivers State, the study specifically sought to:

1. Ascertain the state of available infrastructure and instructional material in secondary schools for Agricultural Science implementation in Ahoada East Local Government Area of Rivers State.
2. Identify student perception and occupational aspiration and its effect on the socio-economic development of Ahoada East Local Government Area of Rivers State
3. Identify teacher's qualification and skill in agricultural science implementation in secondary schools in Ahoada East Local Government Area of Rivers State.
4. To determine strategies to improve student participation in Agriculture so as to reduce crime and improve the socio-economic development of Ahoada East Local Government Area of Rivers State.

Research Questions

The following research questions guided the study.

1. To what extend are there available infrastructure and instructional material in secondary schools in Ahoada East Local Government Area of Rivers State?
2. What are student perception and occupational aspiration it effect on the socio economic development of Ahoada East Local Government Area of Rivers State?
3. To what extend does teacher qualification and skill in teaching agricultural science in secondary schools affect the socio-economic development of Ahoada East Local Government Area of Rivers State?
4. What are the strategies for improving the teaching and learning of Agricultural Science in Secondary Schools in Ahoada East Local Government Area of Rivers State?

METHODOLOGY

The study employed descriptive survey design; for the population simple random techniques were used to select 5 senior secondary schools from the area under study. The entire agricultural science teachers and SS1&2 students in the selected schools were used for the study, which comprised of ten (10) teachers and one hundred and seventy-six (176) students totaling (186) respondents.

Purposive sampling techniques were used to select the entire population since the population was manageable. The sample size of the respondents for the study was 186 which comprise of (10) teachers and (176) students from SS1-SS2 which gave the (186) respondents. The instrument for data collection was a structured questionnaire designed in Likert form strongly agreed=4, agreed=3, disagreed=2, strongly disagreed=1. Data was collected by the use of questionnaire, titled Role of Agricultural Science in Promoting the Socio-Economic Development Questionnaire (RASPSEDQ). The instrument was used to elicit opinion from the respondents on the following, roles of agricultural science in promoting the socio economic development of Ahoada East local Government Area. The variables considered in section B available infrastructure and instructional material, C perception and occupational aspirations and its effect on the socio-economic development, D teachers qualifications and skill in agricultural science implementation, E strategies to improve students participation in agriculture. The (RASPSEDQ) was subjected to face and content validation by two experts from Rivers State University agricultural education option, two from heads of department of agricultural science in two of the selected schools in Ahoada East. The reliability of the instrument was tested using 20 respondents' who were not part of the sample, but equivalent in all respects using test-retest method, Cronbach's Alpha reliability estimate was employed and a reliability coefficient of 0.876 was obtained which was considered adequate for the study. The researchers personally administered the questionnaires numbering one hundred and eighty six (186) copies to the respondents. Eight (8) copies were not returned and six (6) copies returned were not in

useable form and a total of 172 copies were completed and returned in useable form, from the respondents given a return rate of 94%, the results were analysed using mean and standard deviation, mean value of 30 and above were accepted and below 30 rejected.

Research Question 1

To what extent are there functional instructional material and facilities available in Ahoada East Local Government Area of Rivers State?

Table 1: Functional instructional material and facilities available

S/N	Statement		SA	A	D	SD	∑	Mean	Remarks
1	Basic instructional material and facilities are not available	n	77	49	30	16	172	3.3	Accepted
		fx	308	147	60	16	531		
2	The available instructional materials are not functional and lack of adequate equipment/machines.	n	80	72	20	0	172	3.1	Accepted
		fx	320	216	40	0			
3	Infrastructural facilities are fully utilized.	n	82	65	25	0	172	2.6	Rejected
		fx	328	186	50	0			
4.	Instructional materials give support to teaching/learning.	n	86	65	15	6	172	3.2	Accepted
		fx	344	195	30	6	575		
5.	Other instructional material like equipment/machines are lacking	n	50	25	77	20	172	3.3	Accepted
		fx	200	75	154	20			

Source: Researcher field work, 2019

Data presented in Table.1, showed the responses of the respondents on the extent the functional instructional materials and facilities available in Ahoada East Local Government Area of Rivers State. From the results showed in the table, basic instructional materials and not available (X=3.3), the available instructional material are not functional (X=3.1), instructional facilities are fully utilized, (X=2.6). Instructional facilities give support to the teaching/learning (X=3.2). Other instructional materials like equipment/machines are lacking (X=3.3).

Research Question 2

What are students' perception and occupational aspiration and its effects on the socio economic development of Ahoada East L.G.A?

Table 2: Students' perception and occupational aspiration and its effects on the socio economic development

S/N	Statement		SA	A	D	SD	∑	Mean	Remarks
1	Students become reluctant to stay in the traditional sector to work as peasant farmers	n	78	65	18	11	172	3.2	Accepted
		fx	312	195	36	11	554		
2	Students tend to develop a negative deficiency in agricultural science.	n	87	68	17	0	172	3.4	Accepted
		fx	348	204	34	0	586		
3	Agricultural occupations are not regarded as prestigious.	n	79	63	24	6	172	3.3	Accepted
		fx	316	189	48	6	559		
4.	Agriculture is meant for the poor members of the society and is uninteresting subject.	n	78	48	36	10	172	3.1	Accepted
		fx	312	144	72	10	538		
5.	Agriculture is all about farming and rearing of animals.	n	50	23	78	21	172	2.5	Rejected
		fx	200	69	156	21	446		

Source: Researcher field work 2019

Data presented in Table 2 showed the responses of the respondents on the students' perceptions and occupational aspirations and its effect on the socio-economic development of Ahoada East LGA of Rivers State. Students become reluctant in the traditional sector to work as peasant farmers (X=3.2), students tend to develop negative attitude in agricultural science (X=3.4), agricultural occupations are not regarded as prestigious (X=3.3), agriculture is meant for the poor members of the society and is uninteresting subject (X=3.1), and agriculture is all about farming and rearing of animals (x=2.5).

Research Question 3

To what extent does teacher qualification and skill in teaching agricultural science affects the socio-economic development of Ahoada East Local Government Area of Rivers State?

Table 3: Teacher qualification and skill in teaching agricultural science and its effect on the socio-economic development of Ahoada East LGA

S/N	Statement		SA	A	D	SD	∑	Mean	Remarks
1	Teacher quality has a strong bearing on agricultural science.	n	80	72	20	0	172	3.3	Accepted
		fx	320	216	40	0	576		
2	Agricultural development depend to a large extend, on the quality of agricultural teachers.	n	87	68	17	0	172	3.4	Accepted
		fx	348	204	34	0	586		
3	Agricultural development depends on the professional and pedagogical competence of the teacher.	n	78	48	36	10	172	3.1	Accepted
		fx	312	144	72	10	538		
4	There is poor job satisfaction on the part of the teacher.	n	50	23	78	21	172	2.5	Rejected
		fx	200	69	156	21	446		
5.	The schools do not have enough personnel to effectively cope with teaching and learning activities.	n	86	65	15	6	172	3.3	Accepted
		fx	344	195	30	6	575		

Source: Researcher field work 2019

Data presented in Table 3 showed the extent teachers' qualification and skills in teaching agricultural science affects the socio economic development of Ahoada East LGA of Rivers State. Teachers qualification have strong bearing on agricultural science (X=3.3), agricultural development depend to a large extent on the qualification of the agricultural science teacher (X=3.4), socio-economic development depends on agricultural development (3.1), there is poor job satisfaction on the part of the agricultural science teachers (2.5), the schools do not have enough personnel to effectively cope with teaching and learning activities (X=3.3).

Research Question 4

What are the strategies for improving the teaching and learning of Agricultural Science in Secondary Schools in Ahoada East Local Government Area?

Table 4: Strategies for improving the teaching and learning of Agricultural Science

S/N	Statement		SA	A	D	SD	∑	Mean	Remarks
1	Taking the students out on field trips to well established farms	n	96	62	14	0	172	3.4	Accepted
		fx	384	186	28	0	598		
2	Providing equipment and facilities for the learning/teaching of agriculture.	n	89	57	25	5	172	3.3	Accepted
		fx	356	171	50	5	582		
3	Making teaching of agricultural science, practical orientated to acquire necessary skills for self employment.	n	109	63	0	0	172	3.6	Accepted
		fx	436	189	0	0	625		
4	Employing quality teachers for the teaching of agriculture science	n	78	65	18	11	172	3.2	Accepted
		fx	312	195	36	11	554		

Source: Researcher field work 2019

Data presented in Table 4 showed the responses of the respondents on the strategies for improving teaching and learning of agricultural science in secondary schools in Ahoada East Local Government Area of Rivers State. Taking the students out on field trips to well establish farms, (X=3.4), providing equipment and facilities for teaching/learning of agricultural science (X=3.3), making agricultural science practical oriented for students to acquire necessary skills for self-employment (X=3.6), employing quality teachers for the teaching of agriculture (X=3.2).

DISCUSSION OF FINDINGS

Based on the analysis of the research questions, the findings showed in Table 1 revealed that basic instructional materials and facilities are not available and the few available ones are not functional and therefore not useable. This finding corroborated with the views of Igbo (2006) that basic instructional materials and facilities are hardly available in the rural areas, and the few available ones are not functional and therefore not put in use by the agricultural science teachers, he further said that this is one of the reasons why students fail practical agriculture from schools in the rural areas. This is also in agreement with Nlebem (2018) that teachers in the rural areas do not utilize few available community oriented instructional resources as means of instruction which makes teaching and learning interesting and lively. The finding also reviewed that other instructional materials like equipment/machines are lacking which give support to teaching and learning. This is in consonant to the study of Swarkabd (2009) that agricultural equipment/machines help students develop farming skills.

Result presented in table 2; showed that students become reluctant in the traditional sector to work as peasant farmers and the students also develop negative attitude towards agricultural science. The finding is in conformity with the work of Hogarth-Scoff and Wilson (2016) that the modern day youth are not interested in traditional method of farming, using hoes and cutlass and other local implements that make farm work tedious and labourious this contributed to the negative attitude on the part of the students to enroll in agriculture as a career in the universities and other higher institutions. The table went further to

reveal that agricultural occupations are not regarded as prestigious, and that agriculture is meant for the poor members of the society and is an uninteresting subject. This finding is in agreement with the work of Chu and Brij (2007) that agricultural occupations are looked down in developing countries as occupation for the poor, aged, woman and dawn trodden in the society and this makes agricultural studies uninteresting for the would be farmers. However this is different from the study of Awogbenle and Iwuamadi (2010) that modern day agricultural production is as interesting as factory or industrial production for almost all the operations are mechanized and that agricultural production in developed countries attract highly educated and wealthy individuals. The table also revealed agriculture is all about farming and rearing of animals. This is contrary to the work of Hogarth- Scott and Wilson (2012) that agricultural production includes agro-business industries, such as canning, milling agricultural mechanization etc.

The findings on Table 3 indicated that teachers' qualification and professional competence has a strong bearing on student understanding of agricultural science and agricultural development, this is in line with the assertion of Imegbenebor (2005) that for Nigeria to produce qualified and competent agricultural graduates for rapid agricultural development, the qualification of teachers must as a matter of fact be taken into account for no educator can produce more than his knowledge The table also showed that there are not enough teachers for teaching and learning activities and that the few available teachers have poor job satisfaction. This finding is in agreement with the finding of Joseph (2016), which revealed that most secondary schools in Nigeria do not have enough agricultural science teachers, that biology and chemistry graduates teach agricultural science and that agricultural science teachers need to be motivated to enable them put up their best.

The findings in Table 4 showed that some of the strategies for improving teaching and learning of agriculture include taking the students out on field trips to well established farms, providing equipment and facilities for learning and teaching; making the study of agriculture practical-oriented in order to acquire necessary skills for self-employment and employing quality teachers. The findings is in consonance with the findings of the study by Nnodim and Johnwest (2016) which revealed that the use of field trips, community oriented resources and industrial attachment of agricultural science students are some of the best ways to pass practical skills on the students.

CONCLUSION

The paper has established that agricultural science does not promote the social-economic development of Ahoada East Local Government Area of Rivers State, based on the following:

- There are no instructional materials and facilities and the few available are not functional for adequate training of the students to bring about socio economic development.
- There is lack of agricultural equipment and machines for use in teaching and learning for students' skill acquisitions that will bring about socio-economic development.
- Students tend to develop negative attitude towards agricultural science due to crude implement used by peasant farmers.
- There are not enough agricultural science teachers and the few available have no job satisfaction and therefore cannot impact positively on the students' to bring about socio-economic development.
- The strategies used in teaching agricultural science cannot bring out the skills required for self-employment and which will result to socio-economic development.

RECOMMENDATIONS

Based on the findings, the following recommendations were made:

Agricultural science can be made to contribute to socio-economic development of Ahoada East Local Government by providing good functional instructional materials and facilities for the teaching and learning of agricultural science, providing equipment and machines for agricultural activities, changing

the orientation and attitude of students toward agricultural production by making farm work interesting and less tedious.

More and motivated agricultural science teachers should be posted to the area. Teaching methods such as field trips, community oriented instructions that bring about skill development in students should be adopted.

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