

## Vocational Skill Competence of Agricultural Science Teachers and Youth Empowerment in Rivers State

**Nnodim, A.U & Johnwest, E.K**

Department of Science and Technical Education  
Rivers State University of Science and Technology,  
Port Harcourt, Nigeria  
[carobinedo@yahoo.com](mailto:carobinedo@yahoo.com)

---

### **Abstract**

*The study was carried out to ascertain the vocational skills competence of agricultural science teachers in secondary schools in Rivers State, and its implications for youth empowerment. It was a survey study, conducted in 120 secondary schools out of a total of 245, with a sample size of 360 teachers purposively chosen. Data were collected using structured questionnaire, designed in the pattern of Likert 5- point rating scale of SA-5; A- 4; U- 3; D-2; SD-1 respectively. Data obtained were analysed with Mean and Standard Deviation, while the hypothesis was tested with z-test statistics at 0.05% significant level. The study found that agricultural science teachers lack most of the vocational skills in agricultural science content areas of crop, livestock and fishery production. Findings also show that poor facilities and inadequate training among others constrained the effectiveness of teacher's skills acquisition, and negatively affects youth empowerment, especially in agriculture. The study therefore, recommended that agricultural science teachers should be given adequate training even as teachers to acquire skills and update their knowledge in agriculture, while facilities and other skill training equipment be provided in the schools.*

---

**Keywords:** *Vocation, Skill, Competence, Youth and Empowerment*

---

### **Introduction**

In Nigeria today, the number of unemployed youth is alarming and has become a serious concern to the government at all levels (local, state and federal). Any country that does not pay adequate attention to the well-being of her youth and its consequences could be sitting on a keg of gun powder. To stem the tide of youth unemployment makes the recourse to agriculture, the highest employer of labour inevitable. There is the need for our youth to go back to the farm armed with the pre-requisite skills needed for efficient production.

Acquisition of vocational skills, especially in agriculture is one of the focal points of Nigeria Educational Policy which makes agricultural science a core subject, especially at the basic level. However, the acquisition of vocational skills is dependent on the teachers' competency. Ezeoba et al (2013) describes competency as a condition or quality of being able to perform some tasks, ability to demonstrate knowledge, skill and abilities to a specific standard. It is an indication of sufficient knowledge and skills that enables one to act in a wide variety of situation (Business Dictionary, 2015). Kayoma (2009) noted that effective and efficient teaching of agriculture for employment and self-reliant entails teacher's possession of competence to achieve expected objectives.

Egbule (2012) rued the situation of Nigeria economy and noted that Nigeria's economy is hanging on the edge of a precipice, resulting from large population of unemployed youth, biting poverty and unrelenting threats of food and social insecurity due to the neglect of agriculture. To evade the impending catastrophe, Nuru (2007) suggested that youths, especially the educated ones should be adequately prepared for jobs of the future while in schools. Youth are persons who are no longer children and not yet adults, person from the time of early teens until a point between 16 and 21 years after which the person is legally an adult

(Uddin, 2013). United Nations Education and Scientific Children Organization (2008) categorized youth as persons between the ages of 15 and 24 years inclusive.

Empowering the youth entails changes in the economic, social, political, psychological as well as cultural aspect of life of the youth and the removal of all encumbrances against the development of their potentials and talents necessary for overall human development. It is the ability to work and participate in the development of the society and enjoy the rewards of labour and be satisfied (Coulshed and John,1998). Youth involvement in agricultural production with the knowledge and skills acquired from the school is the key to these expectations.

Regrettably, Tibi (2012) lamented the brand of vocational agriculture education offered to the students, which he described as unproductive and lacking in entrepreneurial content. According to Tibi (2012) vocational agriculture is currently taught like a science subject for the purpose of passing examination. Alfred and Okojie (2009) pointed out that when vocational agriculture is taught without practical, students end up with cognitive development rather than occupational skills needed for empowerment. Egbule (2012) opines that acquisition of skills in agricultural production by youths is desirable to drive the Nation's economy forward. Albert et al (2012) stated that acquisition of skills is the process of facilitating the development of a novice into an expert. While Adofu, Abula and Agama (2012) believe that youths in agriculture is the panacea to unemployment in Nigeria.

Agriculture offers numerous opportunities for our youth to be economically and socially empowered but requires the skills to be efficient and productive. Such opportunities are abound in crop, livestock and fisheries production, among others. The skills needed for the exploitation of these opportunities were expected to be taught by the school, especially the junior and secondary school. Regrettably, evidences have shown that students graduate from these schools, yet lacking with the necessary skills for agricultural production. What could be responsible for this unfortunate scenario, could it be that teachers of agriculture do not possess the competency to teach these skills? Could it be attributed to the environment and other factors controlling the teachers in their places of work? What could be the effect of this on youth empowerment? Efforts to answer those questions warranted a study of this nature that probes the vocational competence of agricultural teachers and its implication on youth empowerment.

### **Purpose of the Study**

The main purpose of this study was to assess the vocational skill competence of agricultural science teachers and its implications on youth empowerment in Rivers State.

Specifically, the study intends to:

1. ascertain the level of vocational skill competence of agricultural science teachers in crop, livestock and fisheries production
2. determine the effects of vocational skill competence of agricultural science teachers on youth empowerment in Rivers State.
3. identify factors constraining the development of vocational skills among agricultural science teachers in Rivers State.

### **Hypothesis:**

There is no significant difference in the level of vocational skill competence between teachers with more than 10 years and those with less working experiences.

### **Methodology**

The study was conducted in public secondary schools in Rivers State numbering about two hundred and forty-five (245), with agricultural teacher's population of about one thousand and fifty (1,050). The design of the study was descriptive survey that sought the self assessment of agricultural science teacher's vocational skill competency. The sample size was three hundred and sixty (360) teachers purposively

selected from one hundred and twenty (120) public secondary schools across the three politically delineated Senatorial Districts (Rivers West, Rivers South-East and Rivers East). Three agricultural science teachers were selected from each school considering number of years in service. The instrument for data collection was a structured questionnaire partitioned into sections and in the pattern of Likert 5-point rating scale, with each section eliciting responses to address the research questions posed in the study. Data collected were analyzed using mean and standard deviation, with an acceptable minimum value of 3.00. The null hypothesis was tested with Z-test statistics at 0.05% significant level.

## Results and Discussion

**Table 1: Characteristics of teachers**

	No. of Respondents	(%)
<b>Sex</b>		
Male	343	85.75%
Female	57	14.25%
<b>Age</b>		
30 – 39	63	15.75%
41 – 50	196	49%
51 – 60	141	35.25%
<b>Qualification</b>		
NCE	167	41.75%
B.Sc/B.Ed	189	47.25%
M.Sc	26	6.5%
Ph.D	18	4.5%
<b>Experience</b>		
10 – 19	277	69.25%
20 – 29	92	23%
30 and above	31	7.75%

Source: Source: Field survey, 2016

Table 1 shows that male agricultural science teachers are of majority with 85.75% while female teachers were 14.25%. Majority were aged between 41-50 years (49%), majority had B.Sc/B.Ed degree (47.25%), while majority had 10 – 19 years (69.25%) of experience.

## Vocational skill competence of agricultural science teachers in crop, livestock and fishery production.

Table 2: Respondents opinion on teachers' vocational skill competence in crop, livestock and fishery production

Variables S/N	Skills in crop production	TEACHERS		
		$M_1$	$SD_1$	Decision
1.	Mulching	3.30	1.30	Accept
2.	Soil testing	2.57	1.36	Reject
3.	Fertilizer application	3.17	1.33	Accept
4.	Knapsack sprayer operation	3.04	1.58	Accept
5.	Budding of plant	2.63	1.35	Reject
6.	Seed multiplication technique	2.77	1.33	Reject
7.	Grafting technique	2.50	1.34	Reject
8.	Thinning technique	3.37	1.42	Accept
9.	Pruning	3.60	1.38	Accept
10	Transplanting	3.13	1.36	Accept

<b>Livestock Production Skills</b>				
11.	Feed formulation	2.77	1.45	Reject
12.	Dehorning	3.40	1.28	Accept
13.	Brooding of chicks	3.93	1.48	Accept
14.	Artificial insemination	1.93	1.40	Reject
15.	Ear notching	3.10	1.39	Reject
16.	Disinfection	3.03	1.41	Accept
17.	Castration of animal	2.40	1.36	Reject
18.	Use of incubation machine	2.23	1.33	Reject
19.	Use of emasculator for castration	2.53	0.96	Reject
20.	Debeaking technique	2.37	1.33	Reject
<b>Fishery Production Skills</b>				
21.	Spawning techniques	2.60	1.38	Reject
22.	Fries transfer techniques	2.63	1.35	Reject
23.	Stocking	2.77	1.45	Reject
24.	Pond fertilization	2.23	1.33	Reject
25.	Deweeding technique	2.70	1.55	Reject
26.	Pond diking	2.77	1.45	Reject
27.	Desilting	2.37	1.33	reject
28.	Cropping system	2.57	1.36	Reject
29.	Operation of fish egg insulator	2.70	1.49	Reject
30.	Liming of pond	2.93	1.48	Reject
<b>Grand mean and SD</b>		<b>2.73</b>	<b>1.38</b>	

Source: Field survey, 2016

M – Mean

SD – Standard Deviation

$M \geq 3.00$  Accept

$M < 3.00$  Reject

Table 2 shows that out of the (10) production skills identified in crop production, respondents level of competence were high in five skills: mulching (3.30), fertilizer application (3.17), pruning (3.60), use of sprayer for agricultural chemicals (3.04), crop thinning (3.37), and crop transplanting (3.13), respectively. The respondents had low level of competence in skills such as soil testing (2.57), budding (2.63), seed multiplication (2.77), and grafting (2.50) respectively. In livestock, majority, were competent with dehorning (3.40), brooding of chicks (3.93), sanitation and disinfection of livestock pens (3.03) respectively. While skills such as feed formulation, artificial insemination, ear notching, castration, use of incubator and emasculator and debeaking skills recorded low level of competence among respondents with mean values of 2.77, 1.93, 2.10, 2.40, 2.23 and 2.37 respectively. While in fishery production, ten skills were identified and respondents showed low level of competence in all. The findings show that teachers of agriculture in public secondary schools in the state lacked the pre-requisite skills in agricultural production to teach the learners. This is evident, since one cannot give what he has not, hence teaching of agriculture in our schools focuses on cognitive development to the detriment of the vocational skills needed for production. Thus, the findings corroborated the opinions and assertions of Tibi (2012) and Alude (2011) that agricultural teacher's offer learners unproductive teaching, lacking in entrepreneurial content due to poor delivery strategies.

### **Effects of lack of vocational skill competence of agricultural science teachers on youth empowerment**

Table 3: Respondents opinions on effects of lack of vocational skills competence on youth empowerment

s/n	Variables	$M_1$	S D <sub>1</sub>	Decision
-----	-----------	-------	------------------	----------

1.	Poor academic performance	3.38	1.08	Accepted
2.	Lack of saleable and entrepreneurial skills	3.48	0.93	Accepted
3.	High level of unemployment and dependency	3.19	1.00	Accepted
4.	Poor attitude towards agricultural activities	3.14	1.36	Accepted
5.	Increased poverty among youths	4.19	0.77	Accepted
6.	Poor productivity in agriculture	3.71	0.93	Accepted
7.	Poor economic and social statuses	3.14	0.97	Accepted
8.	Low enrolment into vocational agriculture programmes	3.44	1.00	Accepted
9.	Lack of relevant knowledge of agricultural development principles	3.45	1.12	Accepted
10.	Lost of motivation and self-esteem	3.55	1.15	Accepted
11.	Increased hunger in the society	3.26	1.06	Accepted
	<b>Grand mean and SD</b>	<b>3.45</b>	<b>1.03</b>	

Source: Field survey, 2016

M  $\geq$  3.00, Accept otherwise reject

Table 3 shows that respondents agreed that poor academic performance (3.38), lack of saleable entrepreneurial skills (3.48), high level of unemployment and dependency (3.19), poor attitude towards agricultural activities (3.14) and heightened poverty among youth (4.19), respectively, could be some of the effects lack of vocational skills competence of teachers on youth empowerment. Other effects include: poor economic and social status (3.14), low enrolment into vocational agriculture programme (3.44), lack of motivation and self-esteem (3.55) and increased hunger in the society (3.26), respectively. Studies have shown that youth empowerment through agriculture, especially among school graduates is dependent on the acquisition among school graduates is dependent on the acquisition of relevant skills from the schools which the teachers own the responsibility. However, where the school fails to impart these necessary skills to the students, agricultural productivity would be seriously affected. That was the reason Egbula (2012) asserts that utter neglect of agriculture by the youth would result to army of unemployed youth, increased poverty and threats to food and social security. Agriculture is unattractive to the youth, because of mode of operations, schools are meant to teach modern and scientific agricultural practices, where it becomes impossible then the future and hope on agriculture as major income earner for the economy is doomed. This situation also formed the admonition by UNESCO (2010) that school system should provide quality education that will prepare the youth for effective participation in the workplace that currently requires skills.

### Hypothesis

There is no significant difference in the mean responses between teachers with more than ten years working experiences and those with less experience on their level of vocational skill competence in crop, livestock and fisheries production.

**Table 4: Z-test result of differences between teachers with more than 10 years experience and those with less number of years in experience**

Category #	z-cal	z-crit	N	$\bar{x}$	SD	df	Significant level
more than 10 years experience	0.161	1.960	260	2.96	1.42	358	0.05
less than 10 years experience			100	2.73	1.38		

Source: Field Data,2016

The z-test result of differences in level of competence between more experienced teachers (>10 years) and the less experienced (<10 years) shows no significance difference in the level of vocational skill competence between the two categories of teachers. Therefore, the hypothesis of no significance was accepted, an indication that even the number of years agricultural teachers have taught in the secondary schools did not influence the vocational skill exhibited in the areas of agricultural production tested. The consequence was that the school graduate students who lack the needed skills to go into agriculture as a means of livelihood, hence the army of unemployed youth in the state.

### Factors affecting the development of vocational skills of agricultural science teachers in secondary schools in Rivers State

Table 5: Respondents opinion on factors affecting vocational skills development of agricultural science teachers

s/n	Variables	TEACHERS		
		$M_1$	S D <sub>1</sub>	Decision
1.	Lack of in-service training	3.37	1.43	Accepted
2.	Poor knowledge of subject matter content	2.10	1.54	Reject
3.	Poor lesson time table planning	3.20	1.35	Accepted
4.	Lack of demonstration farm	3.17	0.95	Accepted
5.	Lack of laboratory	3.23	1.33	Accepted
6.	Lack of infrastructural facilities	4.40	0.44	Accepted
7.	Inadequate agricultural curriculum content	3.67	1.27	Accepted
8.	Poor funding of vocational education	4.50	0.42	Accept
9.	Poor attitude of students towards agricultural practical	3.30	1.57	Accepted
10.	Lack of seminar and workshop for teachers update	4.30	0.90	Accepted
11.	Inability to cope with the advancement in technology	3.70	1.42	Accepted
	Grand mean and SD	3.54	1.22	

Source: Field Survey, 2016

Table 5 shows that respondents agreed that factors which include: lack of in-service training (3.37), poor lesson time-table planning (3.20), lack of demonstration farm (3.17), lack of laboratory (3.23) and lack of infrastructural facilities (4.40), respectively. Others were inadequate curriculum content, poor funding, poor attitude of students towards agricultural practical, lack of seminars and workshops for teachers to update their knowledge and skills and inability to cope with the advancement in technology, with mean values of 3.67; 4.50; 3.30; 4.30 and 3.70, respectively. The finding corroborated that of Eni-Olorunda (2008) that vocational teachers and their ability to impart knowledge and skills were hamstrung by inadequate facilities, lack of personnel training, demonstration farms and up-to-date teaching devices among others.

### Conclusion

From the findings, it was deduced that:

1. Most agricultural science teachers in Rivers State Secondary Schools lacked the necessary vocational skills needed for agricultural production, especially in livestock and fisheries production, respectively. This makes the teaching of agriculture more of theories than practices.
2. Graduates of our secondary schools acquire certificates but lack saleable skills and entrepreneurial capacity to be employed or be self-employed, hence the high rate of unemployed youth in our society.



3. Secondary schools in Rivers State lack the capacity in terms of infrastructure to develop the required skill in both the teachers and the students in agricultural production.
4. Agricultural teachers do not attend seminars and workshops to update their knowledge and skills as government seem not to recognize the need for such development courses or programmes.

### **Recommendations**

Based on the findings, it was recommended thus:

1. Agricultural science teachers should be sent on in-service training to acquire skills and update their knowledge in production agriculture, especially modern agricultural practices, such skills acquired would enhance teaching and learning, making agriculture attractive to the youth.
2. Future recruitment of agricultural science teachers should be based on possession of vocational skills by the teacher not only academic qualification. The combination of knowledge and skills by the teacher increases effectiveness and makes the achievement educational goals realizable.
3. The government, its agencies and other stakeholders in education should enrich the teaching/learning environment by providing the needed facilities, which include laboratories, farm, workshop among others for demonstration and practical sessions. This would encourage the active participation of students and enhance skills acquisition needed for employment in the field of agriculture.

### **References**

- Adofu, I; Abula, M. and Agama, J.E. (2012). The effects of Government Budgeting Allocation to Agricultural output in Nigeria. *Sky Journal of Agricultural Research*, 1(1), 1-5
- Albert, C.O., Nnodim, A.U., & Cooney, A.T. (2013). Analysis of skills acquisition programme (SAP) on employment opportunities in rural Rivers State. *Journal of Research on Humanities and Social Sciences*, 3(9), 106-109.
- Alfred, S.B; & Okojie, O.M (2009). Repositioning Secondary level vocational and technical education for sustainable growth and self-reliance in Nigeria. *Journal of Academic*, 4(1) 165-172
- Business Dictionary (2015). Competence. Copywriter © 2015 webfinance-inc. All right reserved. <http://www.vbusinessdictionary.com/definition.html>
- Coulshed, V. and Orme, J. (1998). *Social work practice: An introduction*, 3<sup>rd</sup> edition, London, UK, Palgrave Macmillan, 272 (BASW Practical Social Work). <http://www.eprints.soton.ac.uk/id/eprint/33711>
- Egbule, J.F. (2012). Use of new information and communication technology innovation. Retrieved on 20 November 2015; from <http://www.globalacademicgroup.com>.
- Eni-Olorunda, T. (2008). Inclusive education in Nigeria: A myth or a reality? *International Journal of Emotive Psychology and Sports ethics* 5(2) 76-78
- Ezeoba, K.O; Olibie, E. I & Obi, R.O. (2013). Competency-based education for achieving standard through micro-teaching at Nwafor Orizu College of Education. *Nigerian Journal of Professional Teachers*, 3(2) 51-63
- Kayoma, F.O. (2009). Recreating Vocational Education for self-reliance and productivity. *Journal of Qualitative Education*, 5(1) 37-45.

- Nuru, A. (2007). The Relevance of National Vocational Education Qualification (NUQS) in Technical Vocational Education in Nigeria. *Journal of Research and Development* 2(1), 152-159
- Tibi, E.U. (2012). Vocational agriculture in school for productivity and entrepreneurship: Are we teachers succeeding? *Paper presented at the 2<sup>nd</sup> Distinguished Lecture Series of College of Education, Agbor; Delta State, Nigeria* October 17<sup>th</sup>.
- Uddin, P.S.O. (2013). The role of technical and vocational education in poverty reduction among youth in Nigeria. *Journal of emerging trends in educational research and policy studies (JETEAPS)*, 4(4) 613-617.
- UNESCO (2008). 4<sup>th</sup> Global Youth Employment summit in Azerbaijan. Retrieved from <http://www.unevoc.unesco.org/article/4th+Global+Youth+Employment+Summit+in+Azerbaijan.html>