

Assessment of Agricultural Education Resources for Vocational Skills Development of Students in Universities in Rivers State, South-South, Nigeria.

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Abstract

The study assessed the adequacy of agricultural education resources for vocational skills development of students in universities in Rivers State, South-South, Nigeria. Descriptive survey design was adopted for the study whose population was 98 (11 lecturers and 87 final year students) of agricultural education from the two Rivers State owned-universities in Port Harcourt. Three research questions and three hypotheses tested at 0.05 level of significance guided the study. A 30-item instrument titled “Vocational Agricultural Education Resources for Skills Development Questionnaire(VAERSDQ)” developed by the researchers on a 5-point Likert Scale was used to elicit information from the respondents. Three experts face-validated the instrument whose reliability coefficient was obtained as 0.85 through Cronbach’s Alpha method. Mean and standard deviation were the statistical tools used to analyze the research questions while t-test was used to test the hypotheses at 0.05 level of significance. The findings of the study revealed among others that inadequate training environment and facilities adversely affected the vocational skills development of students in agricultural education in Rivers State. Based on the findings of the study, it was recommended among others that Government should provide adequate training facilities in the universities for the vocational skills development of students in agricultural education in Rivers State, Nigeria.

Keywords: *Agricultural education; vocational skills development; resources; students; assessment.*

Introduction

Vocation can be defined as any skill-based job or occupation carried out by an individual in order to earn a living. Skill as defined by Okorie (2000) refers to human capacity to perform any activity with dexterity and competence. Skills could be seen as special abilities in a given occupation acquired through learning and practice (Samuel, 2017). In the views of Ogbuanya and Bakari (2014), skill refers to individual’s capacity to control element of behavior, thinking and feeling within specified contexts and within a particular task domain. Skills therefore entail special abilities gained through committed learning and practice which enable an individual to be proficient in his work role in a chosen occupational field. According to Yusuf and Soyemi (2012),

vocational skills are vital to the economic and entrepreneurial development of any nation. These vocational skills are imperative in agricultural entrepreneurship to improve the quality of life among the rural populace in Nigeria. Thus, for students of vocational education to be proficient and skillful in their chosen fields of study, they need to develop their skills. Development of appropriate skills and relevant competencies can be made possible through vocational education and training. This kind of education and training for skill development is known as vocational education.

Vocational education is any form of education designed to train learners in relevant knowledge, skills, competencies and attitudes for specific occupations (Nwankwo, 2000). Recipients of vocational education are assumed to have already chosen their life occupations and thus need all necessary trainings to acquire relevant skills and knowledge to enable them develop their expertise and progress in their chosen careers. Fafunwa (1974) posits that vocational education in traditional society aims at training the recipients in character, job orientation and life skills. Vocational skills development is very important if students must become job creators rather than job seekers. Developing vocational skills in agriculture by the students is crucial for poverty alleviation and eradication, economic advancement, social development and environmental sustainability (Amadi & Nnodim, 2018). According to Amadi and Nnodim (2018), relevant skills to perform a specific task in agriculture must be taught in an institution offering agricultural education for students to acquire and subsequently, develop same for proficiency.

Agricultural education as a vocational programme involves a gradual integration of various agricultural skills in the learner. Agricultural education skills are one of the most important and economically rewarding dexterity. According to Osinem (2007), Agricultural education is a process of imparting knowledge, skills and attitudes in agriculture to the learner at any level through hands on experience and guidance to prepare students for entry level jobs. Agricultural education programme enhances improvement of traditional agriculture and concentrates on the training of essential skills such as crop farming, snail rearing, poultry farming, farm management techniques, goat farming among others which are very crucial for a successful career in agriculture (Cajethan & Benardine, 2015). Traditional vocational education is categorized into three domains viz: agricultural education, trade craft and profession (Amadi & Ekezie, 2018). Students therefore need to develop their skills in any of these areas of vocational education to be productive in their job roles. Thus, vocational agricultural education is aimed at inculcating in the students (learners) relevant life skills for self-development and employment generation.

Vocational agricultural education refers to the study of the interrelationship between agriculture as a discipline and the teaching of skills, knowledge, values and attitudes leading to the production of goods, processing and marketing of agricultural and related products for economic development (Arokoyu & Ndeobi, 2014). In the views of Adah and Adejohn (2004) vocational agricultural education uses result as a test of its validity, emphasizing the analytical and prescriptive approaches of education. This aspect of education is aimed at equipping both students and teachers with adequate knowledge, relevant skills and abilities to establish and manage an agricultural farm. Vocational agricultural education is being taught at all levels of education in order to inculcate in the learners' relevant skills and knowledge crucial to sustain them after school, thereby making them productive, self-reliant and employers of labour (Amadi & Nnodim, 2018). According to

Wikipedia (2016), vocational agricultural education is the teaching of agriculture, natural resources and land management through hands-on experience and guidance so as to prepare students for entry level jobs or to further education, to prepare them for advanced agricultural careers. In the views of Arokoyu & Ndeobi (2014), vocational agricultural education provides learners with relevant personal, academic and career experiences and competencies required for active participation in agricultural entrepreneurship. In the same vein, Dipaharima (2004) sees vocational agricultural education as a tool for the promotion of agricultural knowledge and skills in the individuals for innovative skills development necessary for environmental management for the good of the society or the nation at large. According to Usman and Sulaiman (2006), vocational agricultural education is concerned with the development of skills; knowledge and attitude in the field of agriculture to enable the recipients take up a career in it. Vocational Agricultural education in the words of Ezeagu and Ezema, (2004) trains agricultural personnel concerned with growing of crops, rearing of animals, horticulture, farm management among others. Vocational agricultural education covers the following areas of specialization such as animal production/science; crop science/production; horticulture; extension, engineering, veterinary technician or doctor among others which students can avail themselves the opportunity for skills acquisition (Obinne, 2002). Thus, vocational agricultural education is key to students' acquisition of agricultural skills for self-development and career advancement. So many relevant skills in vocational agricultural education can be acquired in cultivation of food crops, cash crops, bee farming, fish farming, processing of crops, production of livestock such as poultry, swine, cattle, rabbit, sheep, goat, among others for self-sustenance and development.

However, in the universities offering vocational agricultural education programmes in Rivers State, it was observed that most students who enrolled in the programme cannot pursue a career in vocational agricultural education upon graduation as a result of inadequate skills acquisition and development. The aftermath effect of this development makes it impossible for them to create jobs for themselves via any of the areas of specialization in agriculture resulting to increased rate of poverty and unemployment. This could be as a result of lack of agricultural education resources such as poor curriculum, inadequate lecturers and instructors, inadequate and obsolete training facilities and materials, lack of pilot farms, ill-equipped libraries, inadequate funding, poor staff welfares, among others. In a bid to ascertain the true cause of the problem, this study was conducted to assess the agricultural education resources for vocational skills development of students in universities in Rivers State, South-South, Nigeria.

Statement of the Problem

Agricultural education students in Nigerian universities have been observed to show poor career interest in vocational agricultural education due to poor skills acquisition and development (Nwankwo, 2000). This development makes it difficult for them to become self-reliant or access paid employment in their field of study upon graduation from the university. In some instances, when opportunities come for them to be gainfully employed in a well-established company, they are unable to cope with the job demands due to lack of skills (Amadi & Nnodim, 2018). This makes the products of agricultural education programmes in Rivers State to appear as perpetually poor individuals. According to Ajani, Mgbenka and Onah, (2015), poverty brings untold sufferings and stress to the unemployed leading to some sorts of physical and psychological trauma which in

most cases results to criminal or violent behaviours such as prostitution, rape, armed robbery, kidnapping, smoking, drug abuse and addiction among others. In the views of Uddin (2013), poverty entails deprivation of the means of subsistence, the inadequate distribution of resources, access to basic social services like education and health, food scarcity, low life expectancy and lack of participation in decision making process, lack of better employment opportunity and the likes are some of the issues affecting vocational agricultural education students upon graduation. Therefore, this study which is conducted on the assessment of agricultural education resources for vocational skills development of students in universities in Rivers State, South-South, Nigeria is aimed at proffering solutions to the problem of unemployment and poverty among graduates of vocational agricultural education programmes by assessing the availability and adequacy of relevant resources such as curriculum, lecturers and training environment and facilities needed for effective skill training and development of students in vocational agricultural education in Rivers State.

Purpose of the Study

The main purpose of the study is to assess the agricultural education resources for vocational skill development of students in Universities in Rivers State, South-South, Nigeria. Specifically, the study sought to:

1. Determine the adequacy of agricultural education curriculum for vocational skills development of students in universities in Rivers State, South-South, Nigeria.
2. Determine the adequacy of agricultural education lecturers for vocational skills development of students in universities in Rivers State, South-South, Nigeria.
3. Determine the adequacy of agricultural education training environment for vocational skills development of students in universities in Rivers State, South-South, Nigeria.

Research Questions

1. How adequate is the agricultural education curriculum for vocational skills development of students in universities in Rivers State, South-South, Nigeria?
2. How adequate are the agricultural education lecturers for vocational skills development of students in universities in Rivers State, South-South, Nigeria?
3. How adequate is the agricultural education training environment for vocational skills development of students in universities in Rivers State, South-South, Nigeria?

Hypotheses

1. There is no significant difference between the mean responses of lecturers and students on the adequacy of agricultural education curriculum for vocational skills development of students in universities in Rivers State, South-South, Nigeria.
2. There is no significant difference between the mean responses of lecturers and students on the adequacy of agricultural education lecturers for vocational skills development of students in universities in Rivers State, South-South, Nigeria.

3. There is no significant difference between the mean responses of lecturers and students on the adequacy of agricultural education training environment for vocational skills development of students in universities in Rivers State, South-South, Nigeria.

Methods and Materials

The study which was carried out in the two universities in Rivers State, South-South Nigeria adopted descriptive survey design. According to Nwankwo (2016) a descriptive survey study is one in which the researcher collects data from a large sample drawn from a given population and describes certain features of the sample as they are at the time of the study without altering any independent variables of the study. The independent variables considered for this study are curriculum, lecturers and training environment of vocational agricultural education programmes of universities in Rivers State. The two universities which offer vocational agricultural education in the state which were used for the study are Rivers State University, Port Harcourt and Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt. The population of the study was 98 (11 lecturers and 87 final year students) of agricultural education from both institutions. No sampling was done since the population was small and manageable. Three research questions and three hypotheses guided the study. The instrument for data collection was a 30-item researchers' self-constructed questionnaire titled "Vocational Agricultural Education Resources for Skills Development Questionnaire(VAERSDQ)" constructed on a 5-point Likert scale of Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (DA) and Strongly Disagree (SDA) with corresponding numerical values of 5,4, 3, 2 and 1 respectively. The VAERSDQ was validated by three experts; two in Agricultural Education and one in Measurement and Evaluation from Niger Delta University, Wilberforce Island, Amassoma, Bayelsa State. The instrument's reliability was ascertained via Cronbach's Alpha method and a reliability index of 0.85 was obtained after pilot testing using 6 lecturers and 22 students of agricultural education from Federal College of Education (Technical) Omoku, Rivers State. The instrument was administered to the respondents by the researchers who also retrieved same from them after duly filled. A total of 93 (11 from lecturers and 82 from students) questionnaire representing 94.8 % was successfully retrieved from the respondents and used for data analysis. Mean and standard deviation were statistical tools used to test the research questions while t-test was used to analyze the hypotheses tested at 0.05 level of significance. For research questions, any item whose mean value is less than the criterion Mean of 3.00 is rejected while any item whose mean value is greater than or equal to 3.00 is accepted. Standard deviation values close or wide apart were used to determine homogeneity in the response of the respondents. For the hypotheses, the decision is that if the calculated value of t (t_{cal}) is equal or less than the critical or table value of t (t_{crit}), the hypothesis would be accepted otherwise rejected.

Results

The results of the study are presented according to the research questions and hypotheses.

Research Question 1: How adequate is the agricultural education curriculum for vocational skills development of students in universities in Rivers State, South-South, Nigeria?

Table1: Adequacy of Agricultural education curriculum for vocational skills development of students in Universities in Rivers State, Nigeria.

S/N	Item Statement	Lecturers			Students		
		\bar{X}_1	SD ₁	Decision	\bar{X}_2	SD ₂	Decision
1	Agricultural education curriculum contains farm management skills for vocational skills development of students.	4.24	0.48	Agree	4.19	0.76	Agree
2	Agricultural education curriculum contains crop management skills for vocational skills development of students.	3.94	0.85	Agree	4.17	0.85	Agree
3	Agricultural education curriculum contains fish farming skills for vocational skills development of students.	4.09	0.90	Agree	3.95	0.86	Agree
4	Agricultural education curriculum contains poultry management skills for vocational skills development of students.	3.65	1.07	Agree	4.50	0.95	Agree
5	Agricultural education curriculum contains cattle rearing skills for vocational skills development of students.	4.68	0.74	Agree	3.76	0.92	Agree
6	Agricultural education curriculum contains skills in horticulture for vocational skills development of students.	4.35	0.84	Agree	4.19	0.97	Agree
7	Agricultural education curriculum contains farm mechanization skills for vocational skills development of students.	4.15	0.82	Agree	4.06	0.94	Agree
8	Agricultural education curriculum contains snail rearing skills for	3.97	0.94	Agree	4.11	1.04	Agree

	vocational skills development of students.						
9	Agricultural education curriculum contains environmental management skills for vocational skills development of students.	4.29	0.65	Agree	4.26	0.81	Agree
10	Agricultural education curriculum contains skills in soil science for vocational skills development of students.	3.79	1.09	Agree	3.78	1.12	Agree
Grand Mean and Standard Deviation		4.12	0.84		4.10	0.92	

Table 1 revealed that both lecturers and students agreed with all the items as skills contained in agricultural education curriculum for vocational training of students. This is evidenced in the mean values of both categories of respondents which are all above the criterion mean of 3.00. Standard deviation values ranging from 0.48 to 1.12 shows homogeneity in the responses of the respondents.

Research Question 2: How adequate are the agricultural education lecturers for vocational skills development of students in universities in Rivers State, South-South, Nigeria?

Table 2: Adequacy Agricultural Education Lecturers for Vocational Skills Development of Students

S/N	Item Statement	Lecturers			Students		
		\bar{X}_1	SD ₁	Decision	\bar{X}_2	SD ₂	Decision
1	Instruction in Agricultural education in Rivers State universities are handled by experienced lecturers in farm management.	3.76	0.43	Agree	3.74	0.50	Agree
2	Agricultural education courses in Rivers State universities are taught by lecturers who specialize in Agricultural Economics.	4.21	0.91	Agree	4.40	0.95	Agree
3	Agricultural education programmes in Rivers State universities are run by lecturers who specialize in Agricultural Extension.	3.88	0.81	Agree	4.00	0.90	Agree

4	Agricultural education programmes in Rivers State universities are coordinated by lecturers having relevant work experience in Agricultural Administration.	4.15	0.78	Agree	4.04	0.92	Agree
5	Agricultural education courses in Rivers State universities are taught by lecturers who specialized in Agricultural mechanization.	3.94	0.89	Agree	3.84	1.05	Agree
6	Agricultural education in Rivers State universities are taught by lecturers who are core agricultural professionals.	4.32	0.77	Agree	4.26	0.94	Agree
7	Agricultural education programmes in Rivers State universities in have lecturers who major in animal husbandry.	3.65	0.98	Agree	3.82	1.22	Agree
8	Agricultural education courses in Rivers State universities are taught by lecturers who have relevant work experience in the field of vocational education.	3.68	1.14	Agree	3.96	1.05	Agree
9	Agricultural education courses in Rivers State universities are taught by lecturers who have farmlands for practice.	3.53	1.24	Agree	4.06	1.23	Agree
10	Agricultural education courses in Rivers State universities are taught by lecturers who are entrepreneurs in vocational agricultural areas.	3.32	1.30		3.73	1.08	Agree
	Grand Mean and Standard Deviation	3.84	0.93	Agree	3.99	0.98	

Table 2 revealed that both lecturers and students agreed with all the items as their mean values are greater than the criterion mean value of 3.00. This is revealed in the mean values of both categories of respondents which are all above the criterion mean of 3.00. Standard deviation values ranging from 0.43 to 1.3 shows homogeneity in the responses of the respondents.

Research Question 3: How adequate is the agricultural education training environment for vocational skills development of students in universities in Rivers State, South-South, Nigeria?

Table 3: Adequacy of agricultural education training environment for vocational skills development of students in universities in Rivers State, Nigeria.

S/N	Item Statement	Lecturers			Students		
		\bar{X}_1	SD ₁	Decision	\bar{X}_2	SD ₂	Decision
1	Agricultural education courses in Rivers State universities are taught in well-equipped modern classrooms.	4.18	0.58	Agree	3.88	0.70	Agree
2	Agricultural education departments in Rivers State universities have adequate staff offices.	3.91	1.03	Agree	4.05	0.87	Agree
3	Agricultural education courses in Rivers State universities are taught with relevant instructional materials.	3.85	0.93	Agree	4.02	0.85	Agree
4	Agricultural education books are readily available in the universities' libraries for staff and students' use.	4.06	0.95	Agree	3.99	0.89	Agree
5	Agricultural education courses in Rivers State universities are taught in classrooms and fields.	3.68	1.07	Agree	4.06	0.90	Agree
6	Agricultural education programmes in Rivers State universities have pilot farms for practice.	2.65	0.98	Disagree	2.72	0.89	Disagree
7	Agricultural education programmes in Rivers State universities have laboratory complexes for experimentation.	2.66	1.05	Disagree	2.97	1.11	Disagree

8	Farm tools and machines are used for skill training of agricultural education students in Rivers State Universities.	2.62	1.04	Disagree	2.86	0.95	Disagree
9	Adequate electric power supply is provided for effective teaching and learning of agricultural education in Rivers State universities.	3.46	0.91	Agree	3.88	1.05	Agree
10	Agricultural education students in Rivers State universities sometimes go for industrial visitation at agricultural research institutes in the state.	2.78	1.02	Disagree	2.69	0.86	Disagree
Grand Mean and Standard Deviation		3.39	0.96		3.51	0.91	

Table 3 revealed that both lecturers and students agreed with all the items as quality training facilities and conducive environment for agricultural education except items 6,7, 8 and 10 in which they registered their disagreement. This implies that pilot farms, laboratories, farm tools and machines and industrial visitations are not used in the training of students in vocational agricultural education.

Hypothesis 1: There is no significant difference between the mean responses of lecturers and students on the adequacy of agricultural education curriculum for vocational skills development of students in universities in Rivers State, South-South, Nigeria.

Table 4: t-test analysis on adequacy on agricultural education curriculum for vocational skills development of students in Rivers State Universities.

GROUP	N	\bar{X}	SD	df	t-cal	t-crit	Decision
Lecturers	11	4.12	0.84	91	0.07	1.98	Accepted
Students	82	4.10	0.92				

Table 4 revealed that table value t_{crit} (1.98) is greater than the calculated value, t_{cal} (0.07), therefore, the null hypothesis which states that there is no significant difference between the mean responses of lecturers and students on the adequacy of agricultural education curriculum for vocational skills development of students in universities in Rivers State, South-South, Nigeria is accepted.

Hypothesis 2: There is no significant difference between the mean responses of lecturers and students on the adequacy of agricultural education lecturers for vocational skills development of students in universities in Rivers State, South-South, Nigeria.

Table 5: t-test analysis on adequacy on agricultural education lecturers for vocational skills development of students in Rivers State Universities.

GROUP	N	\bar{X}	SD	Df	t-cal	t-crit	Decision
Lecturers	11	3.84	0.93	91	-0.48	1.98	Accepted
Students	82	3.99	0.98				

Table 5 revealed that table value t_{crit} (1.98) is greater than the calculated value, t_{cal} (-0.48), therefore, the null hypothesis which states that there is no significant difference between the mean responses of lecturers and students on the adequacy of agricultural education lecturers for vocational skills development of students in universities in Rivers State, South-South, Nigeria is accepted.

Hypothesis 3: There is no significant difference between the mean responses of lecturers and students on the adequacy of agricultural education training environment for vocational skills development of students in universities in Rivers State, South-South, Nigeria.

Table 6: t-test analysis on adequacy on agricultural education training environment for vocational skills development of students in Rivers State Universities.

GROUP	N	\bar{X}	SD	Df	t-cal	t-crit	Decision
Lecturers	11	3.33	0.96	91	-0.57	1.98	Accepted
Students	82	3.51	0.91				

Table 6 showed that the table value t_{crit} (1.98) is greater than the calculated value, t_{cal} (-0.57), therefore, the null hypothesis which states that there is no significant difference between the mean responses of lecturers and students on the adequacy of agricultural education training environment for vocational skills development of students in universities in Rivers State, South-South, Nigeria is accepted.

Discussion

Table 1 revealed that the curriculum of agricultural education is adequate for vocational skills development of students in Rivers State. This assertion is supported by Amadi and Nnodim (2018) who posited that relevant skills to perform specific tasks in agriculture are contained in the curriculum of agricultural education for vocational skills development of students. This finding is further buttressed by Dipaharima (2004) who saw vocational agricultural education as contained in the curriculum of instruction as a tool for the promotion of agricultural knowledge and skills in

the individuals for innovative skills development necessary for environmental management for the good of the society or the nation at large. However, this finding is in contrast to the views of Nwankwo (2000) who posited that the skill content of our current curriculum of technical vocational education in Nigeria is insufficient which makes it impossible for learners to acquire skills for self-development.

Table 2 showed that adequate agricultural education lecturers are available in universities in Rivers State for quality instructional delivery. However, this finding is in disagreement with Amadi and Nnodim (2018) who posited that one of the factors affecting the implementation of vocational agricultural education in Rivers State, Nigeria is inadequate lecturers and instructors who are to teach students in order to develop their vocational skills. Similarly, this finding is in line with Makusidi (2016) who posited that inadequate manpower is a major problem of vocational agricultural education in Nigeria.

Table 3 showed that the training environments used for agricultural education programmes in universities in Rivers State are not adequate enough to train students in vocational skills development in agriculture. This assertion is supported by Nwankwo (2000) who stated that inadequate equipment and tools is one of the areas where vocational agricultural education suffers a lot which negatively affects learners' ability to acquire relevant in vocational agricultural skills. This finding is further buttressed by Nnodim and Johnwest (2016) who stated that lack of adequate training facilities and infrastructures are some of the factors affecting vocational agricultural education in Nigeria. Similarly, Amadi and Nnodim (2018) opined that inadequate training facilities and materials as well as poor funding are some of the major factors militating against the development of vocational agricultural skills among youths in Rivers state.

Table 4, 5 and 6 revealed that there are no significant differences between the mean responses of both categories of respondents (lecturers and students) on the adequacy of agricultural education curriculum, lecturers and training environments for vocational skills development of students in Rivers State, Nigeria. This implies that all the null hypotheses are accepted. It therefore follows that according to table 4, the lecturers and students agreed that the curriculum of vocational agricultural education is very rich to train students in vocational skills. Similarly, the finding as contained in table 5 revealed that the respondents believed that adequate lecturers are available to train students in vocational skills. Furthermore, the result as indicated in table 6 showed that the respondents agreed that adequate training environment and facilities are available for vocational skills development of students in Rivers State.

Conclusion

Vocational Agricultural education is aimed at training students in relevant areas of agriculture so that they can develop their skills for job creation and entrepreneurship. Thus, for agricultural education programme to yield the expected results of providing vocational training to students in diverse areas in the field of agriculture, there is need for adequate provision of relevant resources in the host universities for successful skills development of students for agricultural career advancement.

Recommendations

Based on the study findings, the following recommendations are suggested:

1. Government should provide adequate farmlands to universities for effective training of students in vocational agricultural education in Rivers State.
2. Government should provide adequate farm tools and machines for effective skill development of students in vocational agricultural education.
3. Agricultural education programmes in universities should be taught in the school environment as well as on the fields to strike a balance between theory and practice.
4. Government should provide adequate funding for effective implementation of vocational agricultural education in universities in Rivers State, Nigeria.

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