

AREAS OF MODIFICATION IN THE TRAINING OF STUDENT-TEACHERS OF AGRICULTURE IN COLLEGES OF EDUCATION FOR JOB CREATION IN SOUTHEAST NIGERIA

BY

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Abstract

The study was carried out to identify the areas of modification in the training of student-teachers of agriculture in colleges of education for job creation in South-East Nigeria. The study was guided by two purposes and two research questions. The study adopted descriptive survey research design. The population of the study was 500 made up of 88 lecturers and 412 final year students of agriculture in Colleges of Education in South-East Nigeria. The sample for the study was 294 made up of 88 lecturers and 206 students. All the lecturers were studied while stratified sampling technique was used to select 50% of the students from each of the colleges of education. The instrument for collecting data was a structured questionnaire developed by the researchers from literature reviewed. The instrument was validated by three experts. The reliability was tested using Kuder-Richardson (K-20) formula and a reliability index was 0.68. The instrument was administered through the help of five research assistants. Data collected were analyzed using Mean, and Standard Deviation and t-test. The result shows that agricultural education requires modification in institutional factors like the method of employing lecturers of agriculture and some aspect of the curriculum like the number of specialized courses among others. It was recommended that National Commission for Colleges of Education should modify the needed areas and integrate them into the programmes of agriculture at the colleges of education level among others.

Introduction

Agriculture is a science, art and practice of growing crops and rearing of animals that are used by man. Agriculture is one of the programmes offered in colleges of education in Nigeria as a course. A college of education according to Azunku, Nwebonyi and Uloh (2010) is a tertiary institution in Nigeria with the mandate of training professional teachers in different subjects offered in schools. In the colleges of education, agriculture education programme is not only interested in training teachers but also in making the trained teachers to be self reliant on graduation and that is why

it is grouped as a vocational education. A vocational education according to Okoro (1993) is any form of education whose primary purpose is to prepare persons for employment in recognized occupation. As a vocation, agriculture at National Certificate in Education level is aimed at preparing recipients in its various occupations for self employment, job creation and teaching. Those admitted to receive the training are student- teachers.

A student – teacher is somebody admitted in a programme in teacher educational institution to study the content and methodologies of

teaching a particular subject. In this study, a student - teacher is one admitted to study the content and methodologies of teaching agricultural subject as a programme in a college of education. These student- teachers are taught occupational areas of agriculture like crop farming, animal husbandry, and soil testing among others by their lecturers and technologists. Those who studied agriculture at this level and passed are awarded National Certificate in Education (NCE) after graduation. For good results to be achieved in the training of student-teachers of agriculture as a vocation at the National Certificate in Education level, the National Commission for Colleges Education (2012) outlined its objectives to include to: prepare graduate with the right attitude to, and knowledge/professional competency in vocational agriculture; produce teachers who will be capable of motivating students to acquire interest in and aptitude for agriculture; develop in the student - teachers the appropriate communicative skills for effective transmission of agricultural information and skills to the students in the context of their environment; equip the student-teachers with adequate knowledge and ability to establish and manage a model school farm effectively; and provide a sound background to enhance further academic and professional progression of the student-teachers.

The document also stated the graduation requirement for the course as: General Education Component - 30 credits, Teaching Practice - 6 credits, General Studies -18 credits and Technical and Professional Agriculture Components –64 credits. Observations by the researchers show that technical and professional agriculture component has 64 credits which is 54% while others have 54 credits which are 46%. This negates the recommendations of Imogie (2010) who suggested that the courses in teaching subject

should constitute 75-80% of the total number of courses and credit loads needed to complete the NCE, B.Sc (Ed) programme. Also the components of technical and professional agriculture at this level shows that only three courses with five credit units are practical while others are theory without activities. Thus, the curriculum could be said to be inadequate in terms of providing for occupational training for student – teachers that depend on it to acquire vocational skills in agriculture. According to Azunku (2008) the curriculum of agriculture in colleges of education laid more emphasis on knowledge acquisition and less on professional skills. In addition to curriculum factors, Imogie (2010) noted that institutional factors like decayed, obsolete and inadequate infrastructure which are incongruent with the appellation of being centre of excellence and demoralized staff and students due to an environment that is not conducive to teaching, learning, research and scholarship affects efficiency.

To solve these problems and ensure that graduates of agriculture in colleges of education are efficient to create jobs on their own, the National Commission for Colleges of Education periodically monitors and supervises the activities of the department of agriculture in the colleges through accreditation. But the accreditation processes is aimed at input, process, and facilities and not on feedback which determines the effectiveness of its developed curriculum in creating jobs for graduates of agriculture. The inadequacies of professional skills have lead to the production of graduate who are not properly trained and cannot grow in any of the occupations of agriculture taught in the colleges of education in South-East geopolitical zone of Nigeria.

South-East geopolitical zone of Nigeria is made up of five states namely Abia, Anambra, Ebonyi, Enugu and Imo States. There are seven colleges of education in the zone and all of them offer agricultural education. The zone is found

within the rainforest areas, it has good fertile land for the production of crops and rearing of animals. This could be why stakeholders advised colleges of education in the zone to offer agricultural education so as to teach student- teachers modern principles and practices of crop and animal production. The idea is for the student- teachers on graduation to teach the younger ones, serve as extension agents to their parents, enter into any of the small and medium scale enterprises occupations and create jobs in agriculture. However personal experiences and interactions of the researchers with many of the graduates of agriculture from colleges of education in South-East Nigeria shows that many of them cannot start self employed jobs but prefer to teach in private crèche or day care, nursery, primary, and secondary schools while others especially the males prefer to join trading. This could be as a result of the fact that many of them lack professional vocational skills which they can use to start any enterprise in agricultural occupations.

To help student- teachers development entrepreneurship skills in occupational areas of agriculture, certain aspect of institutional and curriculum factors have to be modified. This will help students acquire necessary skills, remove phobia associated with establishing a business, reduce over dependence on government for paid employment and increase diversification of jobs. The purpose of the study therefore is to identify the areas of modification in curriculum and institutional factors in the training of student-teachers of agriculture in colleges of education for job creation in South-East Nigeria.

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Research questions

The following research questions guided the study.

- a. What are the institutional related factors that need modification in the training of student-teachers of agriculture in colleges of education for job creation?
- b. What are the curriculum related factors that need modification in the training of student-teachers of agriculture in colleges of education for job creation?

Hypotheses

The following hypotheses guided the study

- a. There is no significant difference in the responses of lecturers and students-teachers of agriculture on the institutional related factors that needs modification in the training of student- teachers of agriculture in colleges of education for job creation.
- b. There is no significant difference in the responses of lecturers and students-teachers of agriculture on the areas of curriculum related factors that needs modification in the training of students- teachers of agriculture in colleges of education for job creation.

Methodology

The study adopted use of survey research design. Gall and Borg (2007) stated that survey research design is a method of data collection using questions or interviews to collect data from a sample that has been selected to represent a population to which the findings of the data analysed can be generalized. Nworgu (2015) noted that survey research design is one in which a group of people or item is studied by collecting and analyzing data from a representative of the entire group. The design is appropriate for the study since the researcher used questionnaire as instrument to collect data from a representative of the respondents. The population for the study was 500 comprising of 88 lecturers and 412 final year students of agriculture in Colleges of Education in South East Nigeria. The sample for the study was 294 made up of 88 lecturers and 206 students. All the lecturers were studied while stratified sampling technique was used to select 50% of

the students from each of the colleges of education. The instrument used for collecting data was questionnaire titled Areas of Modification in the Training of Student-Teachers Questionnaire (AMTSTQ). The instrument was developed by the researchers from literatures reviewed and it was validated by three experts from the Department of Agricultural Education, Alvan Ikoku Federal College of Education Owerri. Kuder-Richardson (K-20) formula was adopted to determine the inter-item consistency of the questionnaire items after a single administration of the instrument to eight lecturers from the Department of Agricultural Education, Federal College of Education Obudu Cross River State. After collection, data was analyzed and a coefficient of 0.98 was obtained which shows that the instrument is reliable.

The instrument was administered with the help of five research assistants who were briefed and trained on how to administer and retrieve the instrument. Within two weeks the instrument was distributed and collected and all were returned representing 100% retrieval rate. The data collected were analyzed using Mean and Standard Deviation. Four response options of Strongly Needed Modification (SNM), Needed Modification (NM), No Modification Needed (NMN) and Strongly No Modification Needed (SNMN) were posed for the respondents for each item. Each of the item was assigned a value, thus SNM=4, NM=3, NMN=2, and SNMN=1. This produced a mean of 2.50. With reference to the research questions, any mean of 2.50 and above was accepted as item that require modification and any item below 2.50 is rejected which means it doesn't require modification. T-test statistics was used to test the two null hypotheses at 0.05 level of significance.

Results

The results of the study are presented in the tables below

Table 1: Mean, Standard Deviations and t-test analysis of the responses of lecturers and students-teachers of agriculture on the institutional related factors that needs modification in the training of student- teachers of agriculture in Colleges of Education for job creation

Item Statement to modify	X1	X2	GX	SD	t-cal	Df	Sig	Dec	
Ordinary level requirement for admission.	2.84	2.60	2.72	0.45	5.11	292	0.72	NM	NS
Method of land acquisition for practicals.	2.55	2.74	2.65	0.47	9.03	292	0.06	NM	NS
Periods of changing departmental laboratory facilities	2.96	2.82	2.89	0.45	2.99	292	0.09	NM	NS
The process of supplying reading materials in the departmental libraries.	2.72	2.68	2.70	0.56	0.87	292	0.58	NM	NS
The provision more of lecture halls.	2.88	2.68	2.78	0.42	4.37	292	0.10	NM	NS

The time for practical agriculture to enhance learning.	2.99	2.54	2.77	0.53	8.65	292	0.08	NM	NS
The sponsorship of more lecturers to attend conferences, workshops and seminars	2.80	2.85	2.83	0.40	-1.30	292	0.19	NM	NS
The payment of staff salaries and allowances	2.95	2.72	2.84	0.33	5.94	292	0.10	NM	NS
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The funding of the departments	2.85	2.70	2.78	0.36	3.55	292	0.06	NM	NS
The supervision and monitoring of instructions.	3.08	2.90	3.00	0.27	6.38	292	0.11	NM	NS
The lecturers condition of service	3.07	2.90	3.00	0.25	5.99	292	0.15	NM	NS
The pass marks used for each course to be 50% instead of the present 40% percent.	2.86	2.54	2.70	0.54	8.07	292	0.10	NM	NS
The admission to be purely on merit and interest	2.99	2.67	2.83	0.55	9.76	292	0.13	NM	NS

Key: N = Number of respondents, X = mean, SD = standard Deviation, NM=Need Modification, NS=Not Significant and Dec. = Decision

Result presented in Table 1 showed that all the items had mean ratings in the range of 2.55 - 2.98 with standard deviations of 0.29 - 0.73. This implies that lecturers and the students-teachers accepted the above items as the institutional related factors that need modification in the training of student- teachers of agriculture in Colleges of Education for job creation. This is because their mean values are above the 2.50 cut off for making decision.

Results in the table also reveals that the t- values in the range of -0.53 -9.76 and 6.30 with associated probabilities of 0.06 - 0.72 respectively were obtained. Each of the item show that there is no significant difference in the mean responses of lecturers and students-teachers of agriculture on the institutional related factors that needs modification in the training of student- teachers of agriculture in

colleges of education for job creation. This is because their probability values were above 0.05 level of significance at 292 degree of freedom. Thus the null hypothesis which stated that there is no significant difference in the mean responses of lecturers and students-teachers of agriculture on the institutional related factors that needs modification in the training of student- teachers of agriculture in colleges of education for job creation was upheld.

The findings of the study in table 1 showed that the respondents accepted the following as the institutional related factors that needs modification in the training of student- teachers of agriculture in colleges of education for job creation. They include to modify the: ordinary level requirement for admission, ways of providing land for practicals, number of years that departments stay before they change

facilities in laboratories, the process of supplying current text books and journals in the departmental libraries, provision of enough lecture halls, time available for practical agriculture and increase it, period lecturers stay before they are sponsored to attend conferences and seminars, payment of staff salaries and allowances, funding of the departments, supervision and monitoring of instructions, lecturers condition of service, pass marks used for each course to be 50% instead of the present

40% percent and admission to be purely on merit and interest.

Table 2: Mean, Standard Deviations and t-test analysis of the responses of lecturers and students-teachers of agriculture on the areas of curriculum related factors that need modification in the training of students-teachers of agriculture in colleges of education for job creation.

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Item Statement to modify	X ₁	X ₂	X	SD	t-cal	Df	Sig	Dec	
Subject specialist topics in the curriculum	2.95	2.71	2.83	0.48	3.98	292	0.12	NM	NS
The credit load of courses	1.94	1.70	1.82	0.02	6.67	292	0.11	NM	NS
The number of specialized courses	2.97	2.57	2.77	0.02	9.57	292	0.60	NM	NS
The number of practical courses	2.91	2.61	2.76	0.02	7.21	292	0.50	NM	NS
The number of years spent in the programme	2.03	1.67	1.85	0.03	8.68	292	0.06	NM	NS
The number of general courses offered by students of agricultural education	2.70	2.51	2.61	0.04	5.82	292	0.19	NM	NS
The period of students industrial work experience scheme to six months without lecture	2.86	2.65	2.76	0.03	7.36	292	0.06	NM	NS
The activities found in all the courses	2.93	2.71	2.92	0.04	4.64	292	0.09	NM	NS
Students centred activities	2.59	2.68	2.64	0.02	1.58	292	0.50	NM	NS
Modify teaching technique to include guided discovery.	3.08	2.90	2.99	0.27	6.38	292	0.11	NM	NS

Key: N = Number of respondents, X = mean, SD = standard Deviation, A=Agree, D=Disagree, NS=Not Significant and Dec. = Decision

The Result of the study as presented in Table 2 shows that items 14, 16, 17, 19, 20, 21, 22, and 23 had mean ratings above 2.50 with standard deviations of 0.61, 0.46, 0.45, 0.53, 0.59, 0.49, 0.49 and 0.46 respectively. This means that the eight items were the areas of curriculum related factors that needs modification in the training of students- teachers of agriculture in colleges of

education for job. The result also showed that items 15 and 16 had mean ratings of 1.82 and 2.45 with standard deviations of 0.39 and 0.46. Since the mean scores of the items were below 2.50 which is the cut off mean, it implies that the lecturers and final year students of agriculture did not accept the items as the areas of curriculum related factor that needs

modification in the training of students-teachers of agriculture in colleges of education for job creation.

Results in Table 2 also reveals that the t-values are in the range of 1.58 - 9.75 with associated probabilities of 0.06- 0.60 were obtained. Each of the item showed that there is no significant difference in the mean responses of lecturers and students-teachers of agriculture on the areas of curriculum related factors that needs modification in the training of students-teachers of agriculture in colleges of education for job creation. Result showed that there is no significant difference on all the items because their probability values were above 0.05 level of significance at 292 degree of freedom. Thus the null hypothesis which stated that there is no significant difference in the mean responses of lecturers and student-teachers of agriculture on the areas of curriculum related factors that needs modification in the training of students-teachers of agriculture in colleges of education for job creation was upheld.

The findings of the study in table 2 shows that the respondents accepted the following as the areas of curriculum modification in the training of students- teachers of agriculture in colleges of education for job creation. They include to modify the: subject specialist topics in the curriculum, number of specialized courses, number of practical courses, number of general courses offered by students of agricultural education, period for students industrial work experience scheme to six months without lecture, activities found in all the courses, students centred activities and teaching technique to include guided discovery.

The respondents also accepted the following as the areas of curriculum related factors that does not need modification in the training of students- teachers of agriculture in colleges of education for job creation. They include: not to

modify the credit load of courses and the number of years spent in the programme. The findings from hypotheses tested shows that there is no significant difference in the mean responses of lecturers and students-teachers of agriculture on the areas of curriculum modification in the training of students-teachers of agriculture in colleges of education for job creation.

Discussion of the Findings

The finding from the study shows that in Table 1 the respondents accepted the following as the institutional factors that needs modification in the training of student- teachers of agriculture in colleges of education for job creation. They include modifying the ordinary level requirement for admission, ways of providing land for practicals, number of years that departments stay before they change facilities in laboratories and ten others. The findings are in agreement with Imogie (2010) who noted that teacher education should be re-structured in order to equip the products to teach effectively either at primary, secondary or tertiary level. It also agrees with Odo and Elom (2015) in a study on viable measures for enhancing quality assurance in teacher education in Nigeria it was found out that government should massively invest in professional development of teachers in order to retain and properly prepare the teachers in educational system for the challenges of human resources development.

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The finding of the study on the areas of curriculum related factors that need modification in the training of students-teachers of agriculture in colleges of education for job creation shows that in Table 2, the respondents accepted the following as the areas of curriculum modification in the training of students- teachers of agriculture in colleges of education for job creation. They include modifying the: subject specialist topics in the curriculum, number of specialized courses and

five others. The findings are in agreement with Imogie (2010) who noted that for teacher education to be more effective, more emerging specialized courses need to be included in the curriculum to keep the would be teachers abreast of recent developments in lesson delivery.

The finding of the study on the areas of curriculum related factors that need modification in the training of students-teachers of agriculture in colleges of education for job creation also shows that, the respondents rejected the following as the areas of curriculum modification in the training of students-teachers of agriculture in colleges of education for job creation. They include not modifying the credit load of courses and the number of years spent in the programme. The findings are in agreement with Azunku, F.N. (2008) who noted that the number of years spent in NCE programme is enough for professional development of teachers at that level and do not need modification.

Conclusion

The modification of the programme of agricultural education in Colleges of Education is very important to make students current with recent practices in agriculture. This will make the programme more activity oriented and to contain emerging issues in the teaching, learning and practice of agriculture as an occupation. It is believed that the findings of the study if modified could lead to the proper preparation of student- teachers of agriculture in Colleges of Education for job creation thereby closing the skill gaps noticed.

Recommendations for implementation

Based on the findings of the study the following recommendations were made for implementation.

- a. National Commission for Colleges of Education should modify the identified

areas in the curriculum of agriculture in colleges of education.

- b. Lecturers of agriculture in colleges of education should be retrained on the identified areas for efficiency in handling their lectures.
- c. Heads of Departments of agriculture in Colleges of Education should make the programme more practical oriented by increasing students activities.
- d. Students are encouraged to study and practice on their own.

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