
Evaluation of Infrastructural Facilities and Goal Attainment in Agricultural Education Programmes of Colleges of Education in Benue and Kogi States

By

NOAH E. DALUBA

*Department of Agricultural Education,
Kogi State College of Education,
Ankpa.*

Abstract

The study evaluates the state of infrastructural facilities and goal attainment of agricultural education programmes in colleges of education in Benue and Kogi States. Four research questions and one hypothesis were formulated for the study. 20 and 200 agricultural education lecturers and students from the four colleges of education in Benue and Kogi states were purposively sampled and used for the study. A 12 item questionnaire using four point rating scale and a 6 item questionnaire of two point rating scale was used for data collection. Mean, simple percentage and t-test were used in attending to the research questions and the hypothesis respectively. Emerging from the study were that libraries, laboratories, model animal farms, classroom/accommodation problems, well equipped staff offices, internet services, store for tools and others were infrastructural facilities identified to be inadequate while lack of capital, attitude, mode of operation of state organizations, lack of technical know-how, lack of extension personnel and refusal of government to invest were the bottlenecks hindering the inadequacy of infrastructural facilities for agricultural education programmes. Some implications were stated and recommendations were made based on the findings.

Introduction

The role of Agricultural education towards national development cannot be over emphasized, since it is meant to teach the populace about crop and animal husbandry for the benefit of mankind. For this reason, the government at various levels had supported the incorporation of agricultural science education among the core disciplines in the nation's educational system. This incorporation was done for the purpose of increasing youths' involvement in agricultural productivity on a continuous basis. Therefore, the teaching and learning of this course must be done under a conducive atmosphere in order to arouse the interest of the learners towards achieving the targeted educational objectives.

In support of this, Okafor (1999), stated that the effective teaching and learning of agricultural education will need in addition to teachers with required professional training, adequate and update infrastructural facilities. He further added that since education is an industry, it should be able to imbibe in the teachers and teachers to be, a sound training with ultimate aim of teacher the course/subject in schools and colleges. In contrary to the above, most educational institutions including colleges of education have been faced with inadequate infrastructural facilities which have made learning unconducive for the students (Adejoh, 2008). Supporting this, Ibitoye, (2009), observed and stated that the teaching and learning of Agricultural Education has not been well handled due to inadequate facilities.

The teacher is always seen as one major performer in the education industry. In support of this, Ezeali (2004), stated that the quality of teacher(s) is the first condition of any educational reforms but surprisingly, most schools in Nigeria today, still abhor teachers who cannot cope with the demand of the present technological development because of the nature of the environment where the training takes place. To get adequate number of quality teachers to man our primary and junior secondary schools, most especially, in the area of handling agricultural education programmes, our colleges of education should not be toyed with. Effective performance of these agricultural education teachers will solely depends on agricultural infrastructural facilities.

Agricultural infrastructure in this study represents the array of goods and services that contributes to the efficient functioning of agricultural production; processing and marketing (both nationally and internationally). This includes rail, ports, airports, roads, water supply, electricity, telecommunication, post-harvest facilities and marketing infrastructure. For agriculture as one of the seven (7) points agenda as outlined by the President of the Federal Republic of Nigeria, Alhaji Musa Ya'adua, to meet its expected goals, education serve as the major instrument. For any educational system (colleges of education inclusive) to effectively do this, the infrastructural adequacy need to be critically examined and evaluated.

It is on the above premise that this paper intends to evaluate the state or availability of infrastructural facilities and its effect on the goal attainment of Agricultural education programmes in colleges of education in Benue and Kogi States with a view to proffer its implication on national development.

Purpose of the Study

The broad purpose of the study is to critically evaluate the infrastructural facilities and goal attainment of agricultural education programmes in colleges of education in Benue and Kogi States. Specifically, the study seeks to:

1. find out whether there are enough infrastructural facilities in colleges of education in Benue and Kogi States agricultural education programmes.
2. determine whether differences exist between the colleges of education in the adequacy of infrastructural facilities.
3. ascertain whether the state of infrastructural facilities possessed by the colleges of education under review is hindered by any bottleneck(s).

4. determine the possible implication of the results of this study on the achievement of the seven (7) point agenda in Nigeria for national development.

Research Questions

Based on the purpose of the study, the following research questions were formulated to guide the study:

1. Are there enough infrastructural facilities for agricultural education programmes in colleges of education in Benue and Kogi States?
2. Do differences exist between the adequacy of infrastructural facilities between the colleges of education under study?
3. Are there any bottleneck(s) hindering the provision of infrastructural facilities by the colleges of education under study?
4. What implication will the results of this study have on the achievement of the seven (7) point agenda in Nigeria for national development?

Hypothesis

The following hypothesis will be formulated and tested at 0.05 level of probability.

There is no significant difference between the perception of Agricultural education lecturers and students from the four (4) colleges of education on the state of infrastructural facilities and goal attainment of agricultural education programmes.

Methods

The study employs a survey design. The population for the study comprises of 998 and 38 students and lecturers in agricultural education respectively.

All the population were drawn from Kogi State College of Education, Ankpa (264 students and 9 lecturers); Federal College of Education, Okene (258 students and 10 lecturers); College of education, Oju (283 students and 11 lecturers) and College of Education, Katsina Alla (198 students and 8 lecturers).

For the purpose of this study, 200 students and 20 lecturers were purposively selected and used for the study. The above information is represented in table 1 below.

Table 1: *Distribution of study population and sample*

Name of institution	Total no. of students	Total no of lecturers	Total	No of students sampled	No of lecturers sampled	Total
KSCOE, Ankpa	264	9	273	50	5	55
FCE, Okene	258	10	268	50	5	55
COE, Oju	283	11	294	50	5	55
COE K/Ala	193	8	201	50	5	55
Total	998	38	1036	200	20	220

Instrument for Data Collection

The data for this study was collected with the use of structured questionnaire, documents containing students list according to department from the admission office and personal observations by the researcher of all the colleges. The questionnaire was divided into three (3) sections containing 12 and 6 items respectively. Section B was used to provide answers to research question one (1) while section C was used to provide answers to research question three (3). The questionnaire was constructed on a four point rating scale that is 4 = very adequate; 3 = moderately adequate; 2 = adequate and 1 = not adequate. The instrument was validated by two experts, one each from Agricultural Education Department, University of Nigeria, Nsukka and Measurement and Evaluation Department, Benue State University, Makurdi. The internal reliability of the instrument was determined using 15 students and 3 lecturers in agricultural education. The result of the pilot study was determined using Cronbach alpha coefficient and a reliability index of 0.82 was obtained and this was high enough for acceptability.

To provide answers to research question three the questionnaire was constructed on a two (2) point rating scale of Agree and Disagree.

Data collected with section B of the questionnaire to answer the research question one would be analysed using mean. Any item(s) that obtains a mean score of 2.50 and above was regarded as adequate and that a mean score below 2.50 would be regarded as not adequate. The data collected with section C of the questionnaire to answer the research question three would be analysed using simpler percentage. Any item(s) that obtains 50% and above would be regarded as Agreeing and those that score below 50% would be regarded as disagreeing.

The only formulated hypothesis would be tested by means of t-test statistic at 0.05 level of probability. A null hypothesis would be accepted if the value of t-calculated is less or equal to t-critical and rejected if the calculated t-value is greater than the table t-value.

Results

The results of the analysis of the data collected for the study are shown in tables 2 and 3 below.

Table 2
Rating of lecturers and students on whether there are enough infrastructural facilities for Agricultural Education programmes in Colleges of Education in Benue and Kogi States or not.

S/No	Description of items	Lecturer mean X_1	Student mean X_2	Grand mean X_3	Remarks
1	Well equipped libraries	2.30	2.45	2.38	Not adequate
2	Well equipped laboratories	2.00	2.25	2.13	Not adequate
3	Modern crop farms	2.55	2.63	2.59	Adequate
4	Modern animal farms	2.35	2.51	2.43	Not adequate
5	Classroom/accommodation with adequate furnitures	2.05	2.32	2.19	Not adequate
6	Well equipped staff offices	2.30	2.45	2.38	Not adequate
7	Internet services	2.20	2.50	2.35	Not adequate
8	Presence of well spaced store for tools	1.65	2.20	1.93	Not adequate
9	Storage facilities (store)	1.55	1.78	2.00	Not adequate
10	Transport and communication facilities	1.82	1.84	1.83	Not adequate
11	Water supply	1.80	1.86	1.83	Not adequate
12	Constant electricity supply	2.10	2.20	2.15	Not adequate

Table 2 above shows that eleven items out of twelve items obtained mean values below the cut-off point of 2.50 inferring that these items were not adequate to help in promoting agricultural education programmes. Only item 3 recorded a mean score above 2.50 and this can be interpreted that the facility is quite adequate for agricultural education programme. The analysis has shown that both the lecturers and students found eleven (11) of the facilities to be inadequate while only one (1) was found to be adequate.

From the perception of the lecturers and students sampled from the four colleges of education, it can be observed from table 2 that no difference exist between the adequacy of infrastructural facilities between the colleges of education.

Table 3 below will help to provide answer to the research question 3.

Table 3
Perception of lecturers and students on the possible bottlenecks hindering the provision of infrastructural facilities by the colleges of education

S/no	Possible bottlenecks	Lecturer	Agree	%	Disagree	%	Students	Agree	%	Disagree	%
1	Lack of capital	5	5	100	-	0	20	16	80	4	20
2	Attitude	5	4	80	1	20	20	15	75	5	25
3	Mode of operations of state organizations	5	3	60	2	40	20	14	70	6	30
4	Lack of technical know-how	5	4	80	1	20	20	17	85	3	15
5	Lack of extension personnel	5	5	100	-	0	20	18	90	2	10
6	Refusal of government to invest	5	3	60	2	40	20	16	80	4	20

Table 3 above shows that all the six (6) items were perceived positively to be bottlenecks hindering the provision of infrastructural facilities by the colleges of education under study. This is because all the percentage perception of both the lecturers and students were above 50% been the cut-off point or decision rule.

Table 4 below provides the answer to the null hypothesis formulated for this study.

Table 4
T-test on the mean of the rating of lecturers and students in agricultural education on the state of infrastructural facilities and goal attainment of agricultural education programmes.

Variables	N	Mean value— X	SD	t-cal.	t-value	Df	P	Remarks
Lecturers	20	2.01	0.68					Not
Students	200	2.25	0.61	- 15	1.960	218	0.05	significant

Table 4 shows that mean for lecturers is 2.01 with standard deviation of 0.68 while that of students on the other hand is 2.25 with standard deviation of 0.61. It also revealed that the calculated t-value is - 15 while the critical table value is 1.960 at 218 degree of freedom and 0.05 level of significance. From the result, the calculated t-value of -15 is less than the table, t-value of 1.960 inferring that there is no significant difference between the mean ratings of lecturers and students on the state of infrastructural facilities and goal attainment of agricultural education programmes. The formulated null hypothesis is then upheld.

Findings

The following findings were deduced from the study:

1. The respondents confirmed that infrastructural facilities like well equipped libraries, laboratories, modern animals pens, classroom with adequate furnitures, well equipped staff offices, internet services, presence of well spaced store for tools, store for storage purpose, transport and communication facilities, water supply and constant electricity supply were quite inadequate in all the four colleges under study.
2. Both respondents (lecturers and students) ascertained that all the four colleges under study have adequate modern crop farms.
3. Both respondents (lecturers and students) agreed that lack of capital, attitude, mode of operations of state organizations, lack of technical know-how, lack of extension personnel and refusal of government to invest are major bottlenecks hindering the provision of infrastructural facilities in the colleges of education under study.
4. The null hypothesis was upheld as no significant difference exists in the opinion of respondents.

Discussions

As confirmed by the respondents in table 1, many infrastructural facilities like, laboratories, modern animal pens, adequate classroom with furnitures, staff offices, internet services, store for tools, store for storage purpose, transport and communication facilities, electricity and water supply are completely inadequate in the colleges of education under study. This agrees with Adejoh (2008) and Ibitoye (2009) when they stated that most colleges of education are faced with inadequate infrastructural facilities and this has greatly affected the teaching and learning of Agricultural education programmes. Both respondents (lecturers and students) were very objective in their responses to the questionnaire items. The truth of the matter of what is really happening was brought to light by both parties thus making the results of this study reliable and dependable for generalization.

From the study, the results has shown that the inadequacy of the infrastructural facilities arises from the existence of some bottlenecks like lack of capital, attitudes, mode of operations of state organizations, lack of technical know-how, lack of extension personnel and government refusal to invest. This agrees with Idoko (2007) when he stated that in the establishment of educational institution certain factors like capital, technical know-how and personnel must have to be put into consideration and any failure to do this will lead to unattainment of the goal of the establishment.

On the testing of the hypothesis, the results on table 4 show that there is no difference in the opinion of the respondents. This therefore shows the commonality in the views of both the lecturers and the students.

Implications of the Study

Based on the findings and discussions of this study, the following implications emerged:

1. The inadequacy of infrastructural facilities may lead to the production of half backed future agricultural educators and instructors, when this is allowed to happen; the quality of technology transfer will drastically drop leading to underdevelopment of a state in particular and the nation in general.
2. The problem of inadequacy of infrastructural facilities for agricultural education programmes may lead to collapse of the programme and low manpower supply for the various agricultural sectors of our economy, when this occur, there will be reduction in the supply of goods and services for the increasing population.
3. Educational wastage results as lack of infrastructural facilities may lead to reduction in the admission of students for the programme. The situation may put students in registering for unprofitable courses that may be against their interest.
4. Again, the existence of lack of infrastructural facilities may lead to production of less skill proficient products which will increase drop-out rate and unemployment among the youths, this being a major hindrance to technological upliftment of a state and the nation at large.

Conclusion

The study has been quite revealing. We now know the perception of lecturers/students of agricultural education on the state of infrastructural facilities in their colleges. Undoubtedly, agricultural education programme are incapacitated if so many infrastructural facilities resulting from some bottlenecks which has hindered the attainment of the goal of the institutions. The needs for government's intervention in financial and structural provision are very obvious. Besides this, the school administrators/heads should effectively manage any resources made available to them or generated internally. The more this is timely done, qualified, competent and knowledgeable experts will be produced thus helping the government to achieve the seven (7) point agenda in the aspect of agricultural development to meet the food demands of the nations teaming population.

Recommendations

1. The Federal government should make it as a point of duty to give enough financial support via the education trust fund (ETF) to colleges of education for agricultural development projects and programmes.
2. Institutional heads (colleges of education) should in addition to establishing demonstration farms encourage the establishment of farm development scheme and farm venture and they should ensure to fund them with the internally generated revenue.
3. Agricultural education instructors/lecturers should be motivated by exposing them to small scale loans, allowances and short term training programme as this will assist to boost their morale, input and update their knowledge.
4. The NCCE at their own end should try to revisit colleges of education already accredited to run agricultural education programmes to make sure that the

facilities they met at the time of accreditation are really theirs and they are maintained and sustained

5. The state and federal government should increase their subvention rates to colleges of education to assist them in day to day running and handling of maintenance services in agricultural programmes.
6. The inspectorate unit of the Ministry of Education at the state and federal level should ensure to move round colleges to assess some facilities on the ground and put them through where the need arises and should also ensure to forward their findings and recommendations to the appropriate quarters for implementation.

References

- Adejoh, S. O. (2008). *The teaching of agricultural education in schools and colleges*. Kaduna: Eneeks publishers and associates.
- Ezeali, T.O. (2004). Revitalizing education for national development. A critical look. *NASHER Journal*, 2(1), 55-61.
- Ibitoye, S. J. (2009). Agricultural science teaching in secondary schools: Problems and prospects. A case study of secondary schools in Yagba East Local Government Area of Kogi State. *Journal of confluence educators*. 2(1), 21-26.
- Idoko, C. U. (2007). Factors affecting institutional establishment in Nigeria. *Teacher education Journal (TEJ)*, 12(2), 60-66.
- Okafor, E. C. (1999). *Nigeria teachers' education: (A search for new direction)*. Enugu: Forth dimension printing company limited.