IMPROVING THE QUALITY OF AGRICULTURAL SCIENCE TEACHING AND LEARNING IN JUNIOR SECONDARY SCHOOLS IN ORUMBA SOUTH LOCAL GOVERNMENT AREA.

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Abstract

The study was designed to find out the ways of improving the quality of Agricultural Science teaching and learning in J.SS with particular reference to Orumba South Local Government Area Three research questions guided the study. The population of the study consisted of 32Agricultural Science teachers in secondary schools of Orumba South Local Government Area. Questionnaire was the instrument used for data collection. Instrument was validated by experts and Cronbach Alpha Reliability Coefficient was used to determine the internal consistence of the instrument. The instrument yielded a reliability coefficient of 0.88. Mean statistics was used to answer the research questions. Problems confronting implementation of Agricultural science in J S S level includes amongst others lack of qualified teachers, curricula overloaded with content and not related to societal needs, lack of equipment, areas of the subject that needed reform included teaching strategies, skill development, material resources and information communication technology. The Reform strategies to be adopted includes amongst others restructuring of the curriculum to include contents relevant to societal needs, training and retraining of teachers, equipping laboratories and provision of material resources.

Introduction

Scientific and technological knowledge are not static. Researchers are going on everyday all over the world with the aim of improving the living standard of man. The situation calls for a review of the education system from time to time to conform to international standard. Education reform refers to the modification of existing curriculum components such as the objectives, the content, its structure, organizational methods of instruction as well as evaluation in the context of prevaiiing circumstance and aiming at providing a better programme for achieving improvement in the education system (Gusaa, 2008). Educational reform is intended to bring about change in peoples knowledge, understanding, skills, attitudes and behaviours. The ultimate impact will be increased private as well as public benefits will be reflected in indicators such as improved employment

opportunities for trained individuals, greater self employment, self confidence and more job creation.

Agricultural education is a process of imparting knowledge skills and attitude in agriculture to the learner at any level (Osinem, 2008). As the government realized the importance of agricultural education in secondary schools, a great deal of prominence was given to the study of the subject in the 6- 3- 3- 4 system of education. Agriculture is a core subject at the junior and senior secondary school curricula. The broad objectives of agricultural education at the secondary school level according to (Osinem, 2008). include:

- To stimulate and sustain interest in agriculture
- To enable students acquire basic knowledge and practical skills in agriculture.
- To enable students integrate knowledge with skills in agriculture.
- To prepare and expose students to occupations and opportunities in the field of agriculture.
- These objectives have a lot of implications in the study of the subject in Nigeria. Some of those implications include.
- There must be a change in the method of presentation and delivery of individual concepts in classroom and laboratories.
- The curriculum being focused on practical activities demands that the spirit of inquiry be imbibed in the students.
- Textbooks for use in teaching the subject must reflect the dynamic changing character of Agricultural Science.
- Laboratories/workshops must be well equipped.

If these objectives are considered agricultural science will be well taught and learned.

In view of the need to address the crises of educational quality, curriculum reform is called to serve as bedrock in addressing some of the educational problems in Nigeria in the 21st century. This will enable the students to address the challenges of the future. Secondary school agricultural science curriculum must be dynamic and move with the current developments in the world. It therefore needs to be reviewed from time to time in terms of learning environment, assessment and evaluation procedures as well as effective use of available resources. The aim of any reform is to ensure that the programme is always relevant to the nations aspirations and meeting current technological development.

Agricultural science is a core subject in junior and senior secondary school curricula. The implementation of the subject has been on for years in junior secondary schools but, there are a number of problems that confront its effective implementation at that level. These problems range from dearth, of qualified teachers, lack of facilities, ineffective teaching strategies and negative attitude of students and teachers towards the subject (Ofodile, 2002). Another problem of the subject according to Osinem (2008) is that the assessment of the subject is not based on the laboratory experiment and practical field activities of the students. In the recent years there has been clamour for reforms in many facets of the Nigerian society including education. Since the aim of agricultural education is to enable students acquire basic knowledge and practical skills for useful living, there is

the need for reform in all aspects of the implementation of the subject as well as the curriculum content.

Research Questions

The study sought answers to the following research questions:

1. What are the problems confronting effective implementation of Agricultural Science in junior secondary schools in Orumba south L.G.A?
2. What are the areas of Agricultural Science teaching that require reform in Orumba South L.G.A.
3. What are the reform strategies to be adopted to improve the teaching and learning of Agricultural Science in Junior secondary schools in Orumba South L.G.A.

Method

The study was carried out in all the Junior secondary schools in Orumba South Local Government Area of Anambra State. The population of the study consisted of all the agricultural Science teachers in secondary schools in Orumba South Local Government Area. There were a total of 32 Agricultural science teachers in the 15 secondary schools of Orumba South Local Government Area (source: Education Unit, Orumba South Headquarters Umunze).

Sample

All the 32 Agricultural Science teachers were used hence there was no sampling.

The instrument for data collection was a four point structured questionnaire. The questionnaire consisted of items structured in a four point rating scale of Strongly Agree, Agree, Disagree and Strongly Disagree, with weighted values of 4, 3, 2 and 1 respectively.

The instrument was subjected to face validation by two experts in the Department of Agricultural Education of Federal College of Education (Technical) Umunze. The comments of the validators guided the modification of the instrument.

Fifteen copies of the questionnaire were administered to the Agricultural Science teachers in junior secondary schools in Umunneochi Local Government of Abia State to establish the reliability of the instrument. The reliability of the instrument was established using Crombach Alpha. The reliability index arising from this method achieved a degree of internal consistency of the instrument. The data yielded a reliability coefficient of 0.88.

The copies of questionnaire were administered personally to the respondents and all the copies were also returned, representing 100% return rate.

The data collections were analyzed using mean. To reach a decision, the mean of the weighting scale was calculated thus: 4+3+2+1: 4 = 2.50. The decision rule was that items with mean values of 2.50 and above were regarded as agreed while those with mean values below 2.50 were indicated as disagreed.

Table1: Mean Rating on the problems confronting effective implementation of Agricultural science in Junior secondary school in Orumba South Local .Government Area.

S/N	Items	SA	A	D	SD		$\bar{X}$	Decision
1	Students are not engaged in scientific enquiry	128	-	-	-	32	4.00	Agreed
2	Lack of qualified teachers	60	45	4	-	32	3.41	Agreed
3	Curricula overloaded with content	60	51	-	-	32	3.47	Agreed
4	Curriculum not related to the societal needs	128	-	-	-	32	4.00	Agreed
5	Lack of equipment/facilities	72	42	-	-	32	3.56	Agreed
6	Ineffective teaching strategies	80	36	-	-	32	3.62	Agreed
7	Lack of teachers competence	56	42	4	-	32	3.06	Agreed
8	Lack of job satisfaction on the part of teachers	116	9	-	-	32	3.91	Agreed

All the items in table 1 above have mean values above the cut-off point of 2.50 and are regarded agreed by the respondents.

Table 2: Mean Responses of respondents on the areas of Agricultural science that required reform in Orumba South Local Government Area.

S/N	Items	SA	A	D	SD	N	$\bar{X}$	Decision
1	Teaching strategies	16	84	-	-	32	3.13	Agreed
2	Skill Development in students	108	20	-	-	32	3.84	Agreed
3	Material Resources for teaching and learning of Agric science	128	-	-	-	32	4.00	Agreed
4	Curriculum content of Agric Science	120	3	-	-	32	3.84	Agreed
5	ICT/ New instrumental strategies	128	-	-	-	32	4.00	Agreed
6	Quality of teachers	60	51	-	-	32	3.47	Agreed
7	Teachers attitude to work	100	21	-	-	32	3.78	Agreed

All the items in table2 have mean values above the cut-off point of 2.50 and are thus noted as disagreed by the respondents.

Table 3: Mean Responses of respondents on the reform strategies to be Adopted to improve the teaching and learning of Agricultural Science in J.SS in Orumba South Local Government Area.

S/N	Items	SA	A	D	SD	N	$\bar{X}$	Decision
1	Restructuring Agric Sc. Curriculum to include contents relevant to societal needs	72	42	-	-	32	3.56	Agreed
2	Upgrading teachers in computer literacy/ application	80	36	-	-	32	3.62	Agreed
3	Proper remuneration of Agric Sc. Teachers	128	-	-	-	32	4.00	Agreed
4	Massive recruitment of qualified Agric Sc. Teachers	60	51	-	-	32	3.47	Agreed
5	Training & Retraining of teachers	194	133			32	3.59	Agreed
6	Equipping laboratory	128	-	-	-	23	4.00	Agreed
7	Provision of materials resources	128	-	-	-	32	4.00	Agreed

All the items in table 3 above have mean values of 3.56, 3.62, 4.00, 3.47, 3.59, 4, 00 and 4.00 respectively. These mean values are above the cut-off point of 2.50 and are therefore indicated as agreed by the respondents.

Discussion of Results

Research question one was designed to find out the problems confronting effective implementation of Agricultural science in Junior secondary school, Results revealed that such problems included inability to engage students in scientific enquiry, lack of quality teachers over loaded curriculum, curriculum not relevant to the societal needs, lack of equipment and ineffective teaching strategies. Ugwuanyi and Ukwueze (2010) stated that the curriculum used in schools was not appropriate for the needs of a modern society. They observed as well that a major challenge of the teacher was that of curriculum renovation in terms of reforms, updating and diversification. Ajayi (2008) reported that fund for instructional materials, equipment and laboratory facilities were grossly inadequate in the secondary schools.

Research question two sought answer on the areas of agricultural science that required reform, Results of the study showed that areas like teaching strategies, skill development in students, material resources, curriculum content, ICT, quality of teachers and teachers attitude to work needed reform. Students learnt better through a practical approach with the use of equipment. (Akimnade, 1992). Adejoh (2006) also stated that science teachers generally needed to be conversant with modern innovation, teaching strategies and be encouraged to employ these teaching strategies in their teaching. Okeke (1999) stated that many secondary schools in Nigeria lacked qualified science teachers. Teachers were poorly trained in either content or pedagogy and therefore lacked adequate knowledge of content and pedagogy. Results of research question three revealed that the reform strategies included restricting of agricultural science curriculum to include contents relevant to societal needs, upgrading of computer literacy of teachers, proper remuneration of teachers, massive recruitment, training and retraining of Agricultural Science

Teachers, equipping laboratories and provision of material resources.

Conclusion

Reform is to change into an improved form, condition or situation. Reform is necessary so as to look at those areas that are confronting the effective implementation of the Agricultural science programmes in secondary schools. It is believed that if these areas are well handled, it will help to improve the quality of teaching and learning in Junior secondary schools in Orumba South Local Government Area

Recommendations

The following recommendations were made

1. There should be massive training and retraining of teachers
2. Curriculum planners should identify and expunge irrelevant contents and incorporate current topics to make curriculum content comprehensive.
3. The Government must ensure that the basic resources for teaching Agricultural science must be provided.
4. Agricultural Science. Teachers should employ various teaching strategies.

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