STRATEGIES FOR IMPROVING THE MANAGEMENT OF THE SCHOOL FARMS IN SECONDARY SCHOOLS IN EBONYI STATE

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Abstract

The study aimed at examining the strategies for improving the management of school farms in Ohaukwu Local g Government Area of Ebonyi State. Four research questions and two hypotheses guided to study. The study adopted a survey research design. The study was carried out in Ohaukwu Local Government Area selected through multi stage random sampling technique. The population for the study was 91 respondents- 25 principal and 66 agricultural science teachers. A-43 item questionnaire was developed and used for data collection. The questionnaire was validated by three experts. Cronbach alpha method was used for the reliability which yielded a coefficient value of 0.83. Ninty-one copies of the instrument were administered to the respondents and were all retrieved. Data collected were analyzed using mean (X) with standard deviation for answering the research questions while t-test was used to test the hypotheses at 0.05 level of significance. It was found that all the 43 strategies investigated were viable enough in improving school farm management. It was therefore recommended that agricultural science teachers should adhere strictly to all the 43 strategies enumerated in the study

Introduction

Agriculture is the bedrock of Nigerian economy ever before the oil boom in the 70'.The sector has contributed more than 60% of the GDP and provided over 65% employment to teeming population of Nigerians (Taiwo, 2008). In order to sustain these vital roles of agriculture in Nigeria economy, the federal government in collaboration with federal ministry of education decided that agricultural education should be taught in schools and the national curriculum for agricultural education should be developed. The curriculum contains a number of objectives among which are:

- To enable students to acquire basic knowledge and practical skills in agriculture
- To stimulate and sustain student interest in agriculture
- To prepare students for occupation in agriculture

To achieved these noble objectives and in realization that agriculture is practical oriented subject, a school farm is very much needed for practice. The school curriculum therefore, recommended that each school should have farm space called 'school farm' (Ndem, 2008).

According to Ogbazi (1985), school farm is land laboratory and educational facility which help students to co-ordinate classroom theory and practice. He further, emphasized that it is a place where theories, concepts and principles learnt in classroom are demonstrated. Olaitan and Mamam (2001) defined school farm as an area of land specifically earmarked for agricultural activities by the school. In the context of this study therefore school farm is an area of land selected within or outside school premises, where students could be taught the art of farming with emphasis on manipulative skills in preparation for entry into agricultural occupation. School farm therefore aims at imparting farm management skills to students and promote students' interest in agriculture generally. Agricultural science teacher decide on the type of crops and animals to be produced on the school farm, determine the type of cropping system to be adopted, when to plant the crops and to keep the animals. He also organizes various activities in the school farm such as arrangement for productive resources for use and grouping students to execute specific farm activities. Similarly, agricultural science teacher control the use of inputs and supervises the students on the farm during practical work (Olaitan and Mamam, 2001) .This implies that agricultural science teachers play leading role in the day- to- day management of the school farm.

Management by Osuala (2001) is an active

process of decision-making so that the available human and material resources of an organization or enterprise are effectively utilized through the co-ordinating performance of the function of management, planning, organizing and controlling in order to accomplish the aims and objectives of organization or enterprises. Kent (2011) described farm management as the sum-total of all the process and orientation adopted by farmer manger to get his work done through his subordinates. He emphasizes that a manager's particular way, manner or pattern of considering or handling his task refers to management. Farm management has always been and will always be a complicated and demanding task, since farm business is surrounded by uncertainties, demand and changing condition in a very competitive environment. Therefore, good management is crucial a factor in the success of any business and school farm is not exception. To be successful farm manager agricultural science teachers need to spend more time making management decision and developing management skills than their parents and grand parents' did (Ronaled, William and Practicia, 2012). Farm management is conceptualized as the process by which the agricultural science teacher direct the affairs of the school farm through planning, organizing, controlling and supervision in order to attain the goals of the school farm. Management is needed in any enterprise involving series of activities and people, like school farm operation.

Management of school farm is not the sole task of the agricultural science teacher alone. It involves the co-operation of the school principals, the students and other members of the staff in the school. Principals and agricultural science teachers are key actors in the school farm management, although they may differ on the best strategies to adopt in improving the management of the school farm. More so, the school community –relationship and parents' teachers association (P.T.A) are part of the school, therefore it may be necessary to utilize them as some of the strategies for improving the management of the school farm.

Strategies mean various measures that could be used by agricultural science teachers to improve the management of school farm in order to achieve success. This implies that the agricultural science teachers should plan, organize and control the available human and material resources of the school farm skillfully in order to increase the benefit of school farm in terms of practical skills acquisition in agriculture.

In the past, students participated actively in

school farm operation and showed good interest in practical agriculture, but recently they did not show sufficient interest rather they perceived practical agriculture as a waste of time and means of punishing them. Hence, they leave school on graduation without the acquisition of adequate manipulative skills in agriculture to enable them get entry into agricultural occupation Furthermore, the trouble of unskilled graduates emanated from their negative attitude towards agricultural activities during their school days, poor management of school farm by the keys actors in the management of school farm and coupled with government's under funding of school farm It has been observed that there is great decline in the productivity and availability of school farm. Mgbeahurike (2001) maintained that the gradual decline in student interest in school farm operation is as a result of poor management. Nkajemeje (2001) noted that poor management of school farm at secondary school is one of the factors inhibiting student acquisition of practical skills in agriculture. Ajao (2005) noted that under funding of an enterprise leads to poor management of the enterprise. It was further stressed that schools under this situation are financially incapacitated and cannot establish and maintain fish pond, poultry farm and crop farms. It is obvious therefore, that many school farms are poorly

managed, hence there is the need to determine strategies for the improvement as input to policy makers in Ebonyi state in order to tackle the problems of school farm management in secondary schools in Ebonyi state.

Statement of the Problem

It is disheartening to observe the declining in the number of agricultural science teachers and disappearance of school farms in many secondary schools in Nigerian. It is also surprising that Ebonyi state which is a food producing state is not left behind by the disappearance of school farm in its schools. More so, the less emphasis on the use of the school farms for senior secondary school certificate examination has led to the loss of interest in school farm by students, principals and teachers of agriculture. Mgbeahurike (2001) observed that the disappearance of school farms, gradual decline in the productivity of the school farm and insufficient students' interest in practical agriculture is attributed to the poor management of school farm. The Ministry of Federal Capital Territory (2003) reported that agricultural science teachers in the country poorly managed school farm in the area of planning, organizing and controlling resources employed in the production. The problem therefore is what are strategies for improving the management of school farm in secondary schools in Ebonyi State.

Purpose of the Study

The general purpose of this study was to examine the strategies for improving the management of school farm in secondary schools in Ebonyi State. Specifically, the study sought to:

1. determine the effective planning, organizing and controlling activities of the school farm to enhance productivity in Ebonyi State Secondary Schools.

2. examine possible source of fund for the operation of school farm in Ebonyi State Secondary Schools.

3. identify ways of utilizing parent-teacher associations and the school community – relationship in improving the management of the school farm in Ebonyi State Secondary Schools.

4. find out the motivational factor that could increase the student interest to participate actively in the school farm practices in Ebonyi State Secondary Schools.

Research Questions

The following research questions guided the study;

1. What are the effective planning, organizing and controlling activities of the school farm to enhance productivity in secondary schools in Ebonyi state?

2. What are the possible sources of fund for the operation of the school farm in secondary schools in Ebenyi state?

3. What are the ways of utilizing parent- teacher associations and the school- Community relationship in improving farm management in secondary schools in Ebonyi state?

4. What are the motivational factors that can increase the student interest to participate actively in the school farm operation in secondary schools in Ebonyi state?

Hypothesis

The following hypotheses were tested at 0.05 level of significance.

1. Ho_1: There is no significant difference between mean responses of the a gricultural science teachers and principals on possible ways of utilizing school- community relationship and parents teachers' association in improving the management of the agricultural farms in secondary schools in Ebonyi state.

2. Ho_2. The opinion of the agricultural science teachers and principals do not differ significantly on the possible sources of funding the

operation of the agricultural farms in secondary schools in Ebonyi.

Methodology

The study adopted survey research design. The study was carried out in Ohaukwu Local Government of Ebonyi State. Ohaukwu Local Government Area was made up of 25 government senior secondary schools with 25 principals and 66 agricultural science teachers, making a total of 91 respondents. Therefore there was no need for sampling since the population was small and manageable .The researcher developed a 43- item questionnaire for the purpose of assessing the opinion of the principals and agricultural science teachers on the strategies for improving the management of school farm in secondary schools in Ebonyi State. The instrument was validated by three experts one from Department of Technology and Vocational Education and two from department of Education Foundation (Measurement and Evaluation) of Ebonyi State University, Abakaliki. Their suggestions were used to improve the final copy of the questionnaire. The reliability of the instrument was determined using the Cronbach Alpha reliability coefficient;91 copies of the instrument were administered to the respondents by the researcher personally and collected same as well. The entire 91 copies of the instrume himself nt

administered were retrieved and used for the analysis.

The mean with standard deviation were used to answer the research questions while t- test was used to test the two hypotheses at 0.05 level of significance and at 89 degree of freedom. Four-point rating scale of strongly agree, disagree and strongly disagree with corresponding values of 4, 3, 2, and 1,were used for responses. Decision was reached using lower and upper limits of mean. thus:

Strongly agreed:	3.50-4.00.
Agreed :	2.50-3.49
Disagreed :	1.50-2.49
Strongly disagreed:	1.00- 1.49

The null hypothesis would be rejected if the calculated value of the t –test was either equal or greater than the critical value at appropriate degree of freedom and confidence level otherwise would not be rejected.

Research Question 1

What are the effective planning, organizing and controlling activities of the secondary school farm to enhance productivity in Ohaukwu LGA?

Table 1: Mean and standard deviation responses of principals and agricultural science teachers on the effective planning, organizing and controlling activities of school farm Ohaukwu LGA.

s/no	Items	principals		Teachers		overall		Dec.
		$\bar{x}_1$	SD$_1$	X$_2$	SD$_2$	X$_3$	SD$_3$	
	planning activities							
1	Stating the objective of the farm	3.40	0.87	2.83	1.05	3.12	0.96	A
2	Proper survey and layout of the farm	3.16	0.90	2.08	1.03	2.98	0.97	A
3	Preparation of school farm calendar/ programme	2.96	0.94	3.12	0.98	3.04	0.96	A
4	Estimating the overall cost of the farm operation	2.84	0.94	3.40	0.89	3.12	0.92	A
5	Determine the type of crop be planted /animal to be reared	3.00	1.00	3.60	0.82	3.30	0.91	A
6	Determine cropping /animal husbandry system to be adopted	3.12	1.01	2.74	0.10	2.93	0.56	A
7	Determine the overall material input to be utilized.	2.96	0.89	2.92	1.11	2.94	1.00	A
8	Determine appropriate storage and preservation for the farm product.	2.76	1.09	2.78	1.05	2.77	1.07	A
	organizing activities							
9	Assembling and arrangement of crops to be planted and animals to be kept on the school farm.	2.56	1.04	2.79	1.10	2.68	1.07	A
10	Assembling and arrangement of tools/equipment to be used for specific operation	2.60	1.12	3.12	0.92	2.86	1.02	A
11	Grouping student for specific work to be performed on the school farm.	2.88	0.93	3.15	0.95	3.02	0.94	A
12	Assigning plot to each student on the school farm	3.32	0.90	3.48	0.75	3.40	0.83	A
13	Arrange for cultural operations /routing management practices for crops and animals respectively.	2.64	1.04	2.83	1.10	2.74	1.07	A
	controlling organizing activities							
14	Instant supervision /monitoring of students' work on the school farm	3.04	0.94	2.98	1.09	3.01	1.02	A
15	Ensuring that appropriate tools/equipment are used for specific operations in the school farm.	3.08	0.10	2.89	1.18	2.99	0.64	A
16	Ensuring that students do the work themselves	2.84	1.07	2.98	1.06	2.91	1.07	A
17	Ensuring that the time allocated for the school farm activities does not interferes with all other academic activities in the schools	3.20	0.82	2.91	0.99	3.06	0.91	A
18	Ensuring judicious use of farm inputs and resources	2.64	0.96	2.86	1.07	2.66	0.52	A
19	Ensuring that relevant records are kept	3.32	0.95	2.97	0.96	3.15	0.96	A
20	Monitoring the students attitude towards various activities of the school farm	2.68	1.07	2.92	1.03	2.80	1.05	A
	Grand MEAN	**2.99**	**0.93**	**3.00**	**0.96**	**2.97**	**0.92**	**A**

The items as presented in table 1 show the effective planning, organizing and controlling activated that would improve school farm management. The analysis reveal that the cluster mean scores for principals ranges between 2.60 and 3.40 with grand mean of 2.99 for all items while mean scores for agricultural science teachers ranges between 2.74 and 3.48 with grand mean of 3.00 for all the items in the cluster. More so, the overall mean scores for the two groups ranges between 2.68 and 3.40 having overall grand mean of 2.97.Hence, results of the analysis shows that the mean ratings of both groups are all above the benchmark of 2.50 and therefore are all regarded as agreed (A)

Research Question 2

What are the possible sources of fund for the operation of the secondary school farms?

Table 2: Mean and standard deviation response of principals and agricultural Science teachers on the possible source of fund for the operation of the secondary school farm.

s/n	Items	Principal $\bar{x}_1$	SD$_1$	Teachers X_2	SD$_2$	overall X_3	SD$_3$	Dec.
21	Charging levy from students for school farm project.	3.32	0.56	3.06	1.01	3.19	0.76	A
22	Donation of money by the voluntary agencies	2.76	1.01	2.95	0.83	2.86	0.92	A
23	Donation of money by P T A/ philanthropists	3.44	0.65	2.71	1.11	3.06	0.88	A
24	Organizing inter-house sports where people are invited for financial support	2.60	1.04	2.88	0.89	2.74	0.97	A
25	Organizing endowment fund by the school.	2.68	0.90	2.61	1.51	2.65	1.21	A
26	Appeal fund from old boys association /NGO	3.44	0.82	2.89	1.04	3.17	0.93	A
	Grand MEAN	3.04	0.83	2.85	1.07	2.95	0.96	A

Table 2 presented source of fund for operation of secondary school farm. Data from this table shows that the mean ratings of principals ranges between 2.60 and 3.44 having a grand mean of 3.04 all above the cut-off point 2.50, where as in the opinion of agricultural science teachers their mean ratings ranges between 2.61 and 3.06 with grand mean of 2.85 also above benchmark of acceptance. The overall mean which ranges between 2.65 and 3.19 with overall grand mean of 2.95 were all above cut-off point for the two groups of respondents. Therefore all items are regarded as agreed by the two groups, since the mean ratings were all above 2.50

Research Question 3.

What are the possible ways of utilizing the parent- teachers' association and school community-relationship in improving the management of the secondary school farm in Ohaukwu LGA of Ebonyi State?

Table 3: Mean and standard deviation response of principals and agricultural science teachers on the possible ways of utilizing P.T.A and school community relationship in improving management of secondary school farms Ohaukwu LGA of Ebonyi State.

s/n	Items	principals		Teachers		overall		Dec.
		$\overline{x}_1$	SD$_1$	X$_2$	SD$_2$	X$_3$	SD$_3$	
27	Assisting agricultural teachers in organizing labour in tackling tedious farm operation	2.92	0.95	3.00	0.93	2.96	0.94	A
28	Assist in providing security to guide school farm	3.03	0.99	3.03	1.99	3.03	0.99	A
29	Assist in providing planting materials.	3.36	0.95	3.14	1.01	3.25	0.98	A
30	Assist in providing/organizing farm tools to be used in school farm	3.56	0.65	2.95	0.98	3.24	0.82	A
31	Assist in organizing for fund raising activities in the school	3.28	0.84	3.09	1.03	3.19	0.94	A
32	Assist in identifying market and market channels for the farm school products	2.96	1.16	2.83	0.96	2.80	1.06	A
33	Provision of assistance by resource person in the community in organizing enlightenment campaign, workshop and seminar on suitable farm practices and some environmental factors that affect crop and animal production in the area	2.68	0.99	2.89	1.02	2.79	1.01	A
	Grand MEAN	**3.08**	**0.93**	**2.99**	**0.96**	**3.04**	**0.95**	**A**

Data presented in table 3 indicate that all the seven items relating to the utilization of P.T.A and school community-relationship in improving the management of secondary school farms receive the mean ratings of 2.68 and above with grand mean of 3.08 for the principals and 2.83 above with grand mean of 2.99 for the agricultural science teachers. More so, the two groups have 2.79 and above in the overall mean column and 3.04 overall grand mean.

However, the results in table 3 above shows that the grand mean for the two groups are all above criterion mean 2.50 and are all regarded agreed.

Research Question 4.

What are the motivational factors that can increase students' interest to participate actively in the secondary school farm operation in Ohaukwu LGA of Ebonyi state?

Table 4: Mean and standard deviation responses of principals and agricultural science teachers on motivational factors that can be increase students' interest to participate actively in the secondary school farm operation in Ohaukwu LGA of Ebonyi States.

s/n	Items	principals		Teachers		overall		Dec
		$\overline{x}_1$	SD$_1$	?$_2$	SD$_2$	X$_3$	SD$_3$	
34	Develop good relationship with the student	2.92	1.04	3.17	0.94	3.05	0.99	A
35	Inform students ahead of time the task to be performed and tools/equipment required	3.04	0.98	3.09	1.02	3.07	1.50	A
36	Correct student mistakes on the farm instead of condemning what they do	3.08	0.95	3.06	1.01	3.07	0.98	A
37	Give students some of the proceeds from the farm	2.76	0.97	3.02	0.83	2.89	0.90	A
38	Give award to best performed student in practical agriculture	2.72	1.10	3.12	0.90	2.92	0.96	A
39	Involve students in planning, organizing, decision –making and co-ordinating activities of the school farm	3.12	0.93	3.23	0.89	3.18	1.00	A
40	Regular emphasis on technical skills and knowledge to acquired by students.	2.60	1.00	3.03	1.08	2.82	1.04	A
41	Avoid spending long hours on the school farm activities	2.96	1.02	3.33	0.88	3.15	0.95	A
42	Treat student equal without discrimination of either sex or personality.	2.96	0.84	2.93	0.96	2.95	0.90	A
43	Inform students of the expected benefit from school farm	2.92	0.70	2.86	1.15	2.89	0.93	A
	Grand MEAN	2.91	0.95	3.08	0.87	3.00	1.01	A

Data from table 4 above show that all the ten 10 factors as presented are motivational factors that can increase students' interest to participate actively in the secondary school farm activities, since they received mean ratings above the cut-off point 2.50. Specifically principals have mean of 2.60 and above with grand mean of 2.91 while agricultural science teachers had 2.86 and above with 3.08 grand mean. More so the overall mean of 2.89 and above with 3.00 grand mean are recorded by the two groups of the respondents. Therefore, all the items in the cluster are agreed to by the two sets of the respondents.

Table 5: t-test comparison of mean responses of agricultural science teacher and principals on possible ways of utilizing school-community relationship and PTA in improving the management of agricultural farm in secondary schools in Ebonyi State

Items	No	x	So	df	SE	t-cal	t-table	Dec.
Principals	25	3.04	0.83					
Agric. Sc. Teacher	66	2.85	1.07	89	212	0.897	1.98	NS

The analysis in table 5 above reveal t-calculated (0.897) is less than the table value of t at 89 degree of freedom and 0.05 level of significant, hence null hypothesis is not rejected. The result of this test suggest that the different between the mean ratings of the agricultural science teachers and principals on possible ways of utilizing school community –relationship and the parents teachers' association in improving the management of t he secondary school farm is not significantly different.

There is every reason from the results to conclude that there is no significant difference between the mean ratings of the two groups of responses

Table 6: t –test comparison of mean responses of agricultural science teachers and principals regarding the possible sources of funding the agricultural farms in secondary schools in Ohaukwu LGA.

Items	No	x	so	df	SE	t-cal	t-table	Dec
Principals	25	3.08	0.95					
Agric. Sc. Teacher	66	2.99	0.96	89	220	0.408	1.98	NS

Table 6 presents the t-test analysis of different between the mean ratings of principals and agricultural science teachers on possible sources of fund for operating secondary school farm in Ohaukwu LGA. It was revealed that the calculated t-value (0.408) is less than the critical value of 1.98 at 0.05 level of significance and degree of freedom of 89, the null hypothesis as stated above is not rejected. Therefore there is no significant difference between the opinion of principals and the agricultural science teachers on the possible sources of fund for the operation of school farm, hence any observed difference is not true different but a mere chance which can result from sampling errors.

Principal of Findings

1. The management of the school farm to enhance productivity would be improved through effective planning, organizing and controlling activities as shown in table 1 of this study.

2. Fund for the operation of the

school farm would be raised through levy on students, Donation from P.T.A, voluntary agencies/ Philanthropist, organizing inter- house sport and endowment fund and an appeal fund from old boys association.

3.   The community school-relationship and P.T.A could be effectively utilized for improving the management of the school farm in many ways such as assist in organizing labour, providing security, providing planting materials, farm tool, organizing fund raise activities among others.

4.   Students' interest would be increased to participate actively in the school farm activities through motivational activities as indicated in table 4 of this study.

Discussion of Results.

From research question one, it was found that effective planning, organizing and controlling activities were pre-requisite for improved school farm management to hence productivity. These findings indicated that school farms and agricultural science teachers are required to be available in all secondary school for effective

management to be achieved. The findings are in consonance with the findings of Olaitan and Mama (2001) on "principles and practice of school farm management" where it was found out that most of the schools did not have teachers of agriculture, thus, the practical aspect of the subject was poorly handled and management.

The study was also in conformity with the findings of Ndem (2008) on "management of school farm in Abuja" where viable source of fund for operating school farm were enumerated to include levy on students, Donations from P.T.A, voluntary agencies and philanthropist as was revealed by this study.

From research question two it was found that community school- relationship and P.T.A could be effectively utilized for improving the management of school farm. This was in agreement with those of Nkajemeje (2002) in a study carried out on "significance of practical Agriculture in secondary schools." where it was found that community where schools are situated and P.T.A have significant roles to play in enhancing school farm management. Such roles included, assisting agricultural science teacher in providing labour, planting materials, farm tools,

and assist in organizing fund raising activities among others.

On research question four on motivational factors that can increase students' interest to participate actively in school farm activities. The study revealed that developing good relationship with students, involving students in planning, organizing, decision-making and co-ordinating activities, avoid spending long hours on the school farm activities, giving students proceeds from the farm among others as indicated in table 4 of this study are viable factors that can enhance students interest in agriculture. These findings revealed that students' interest remains paramount to effective management of school farm activities and as such must be stimulated and sustained for increased productivity. This finding was line with findings of Mgbeahuruike (2001) on "skill improvement needs of agricultural science teachers for effective management of school farm in secondary schools" where it was found that effective management of school farm depend to a great extent on the interest of students on school farm activities.. However, the study suggested some motivational factors that could arouse interest in the students like those list in table 4 of this study.

Conclusions

The school farm was one of the educational facilities that aid students' acquisition of practical skills and technical knowledge in agriculture as well as a good source of funds for the school to supplement the government under funding of the school farm. Unfortunately, these demands were not meant by the school farm due to poor management lack of students' interest and poor staffing. This study made some contributions to knowledge and to the school administrator, policy makers of the ministry of education Ebonyi State on strategies for improving the management of the school farm to hance productivity, develops required skills and technical knowledge in the students; motivate student interest in farming and generate more funds for thesecondary schools.

Recommendations

In view of the above findings, it was recommended that:

1. The agricultural science teachers should adhere strictly to the planning organizing and controlling activities as revealed in this study.

2. The agricultural science teachers should motivate the students to participate in the school farm

activities by adopting the factors highlighted in the findings of this study.

3. The possible source of funds revealed in the study should be effectively adopted by agricultural science teachers in collaboration with the school principals.

4. The parents, students and community should be involved in planning and implementation of school farm programme.

5. Agricultural science teachers and principal should design school farm Programme locally and adapted to specific local needs with strong involvement of ministries of education and agriculture.

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