

# Mechanisms for Enhancing Teachers' Effectiveness in the Implementation of Agricultural Science Programme in Secondary Schools in Afikpo Education Zone of Ebonyi State

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## Abstract

Poor performance of students in agricultural science at the internal and external examinations has been attributed to ineffectiveness of the agricultural science teachers at the secondary schools in Afikpo education zone of Ebonyi State, therefore, this research determined the mechanisms for enhancing the teachers' effectiveness in the implementation of secondary school agricultural science programme. The study adopted survey research design. The population of the study was 117 and there was no sampling, rather the whole population was studied. A structured questionnaire was used to collect data for the study. The instrument had 4 points modified likert scale. The instrument was validated by using Cronbach alpha which yielded reliability co-efficient of 0.96. Data were collected by the researcher administering the questionnaire to the respondents. Data analyzes involved both descriptive and inferential statistics. Based on the analysis of the data, it was revealed among others that provision of incentives, regular training and retraining of the teachers enhance the effectiveness of the teachers in the implementation of the secondary school agricultural science programme. Based on the findings, it was recommended, among others, that the Ebonyi State Ministry of education in collaboration with the school principals should try to provide incentives to the teachers and organize conferences, seminars and workshops to update the teachers' knowledge.

**Keywords:** Mechanism; teachers effectiveness; implementation; agricultural science programme

## INTRODUCTION

Secondary education is the form of Education which children receive after primary education and before the tertiary stage (Federal Republic of Nigeria, 2008). In Nigeria, at present, secondary education lasts for six years, which is divided into 3 years of junior class and another 3 years of senior secondary class (FRN, 2008). In secondary schools, many subjects are offered and Agricultural science is one of the core subjects taught in secondary schools. It has the objective of inspiring students towards academic achievement and self-improvement both at school and production of agricultural items in later life. Agricultural Science therefore is an important secondary school subject as it prepares the students for life career after school.

According to Omeje (2001), agricultural science is the art and science of growing crops and rearing of animals for man's use. It includes the processing, marketing, storing and transportation of crops and animals and their by-products.

According to the FRN (2008) the following are the objectives of agricultural science programme at the secondary schools, include;

- a. To stimulate and sustain student's interest in agriculture
- b. To enable student acquire basic knowledge and practical skills in agriculture.
- c. To prepare students for further studies in agriculture.
- d. To prepare students on basic scientific knowledge and attitudes required for entry into agricultural occupation.

Specifically, the FRN (2008) identified the following areas of concern for the students' interest in the Agricultural Science programme:

- a. Students should be exposed to opportunities in the field of agriculture.
- b. Students interests should be stimulated and sustained in Agriculture.
- c. Students' knowledge should be integrated with skills in the field of agriculture.
- d. Students should adequately be prepared in agricultural field.
- e. Students should be taught and allowed to mature with the basic skills and knowledge in the field of agriculture.

It appears that the lofty objectives and goals of Agricultural Science programme at the secondary school level in Nigeria as enunciated above are not being fully realized which may be attributed to numerous factors such as lack of the teachers of the subject, shortage of facilities and teaching materials, poor attitudes of the students, use of inappropriate teaching techniques, poor supervision of the teachers by the principals and use of unqualified teachers and teachers with obsolete ideas as well as ineffectiveness of the agricultural science teachers. The teacher is someone who is trained academically to impart knowledge, skills and values to the learner. Therefore, just as Egwin (1982), reported that "whatever innovations to be made in the education of any

nation, should be implemented by teachers". Thus, as the pivot for the implementation of educational programmes like Agricultural Science, the failure of the teachers would ultimately lead to the failure of the programme. To ensure effective implementation of agricultural science programmes, the male and female teachers should be well trained, given incentives, provided with adequate teaching materials, being well supervised and appropriate teaching methods adopted by the teachers themselves.

Furthermore, Chukwudum (1983), reported that teachers with certificates are numerous but, the trained ones with the skills to really impart the knowledge and skills on the students are few. Olaitan and Mama(2001<sup>4</sup>) noted that teachers' professional training, experience and interest are supposed to help greatly in achieving progress towards the Agricultural science programmes in secondary schools, but in this era, it has not been so.

Since Nigeria's independence in 1960, the methodology and curricula of education at all levels have continued to experience tremendous changes (Fafunwa, 1984). Unfortunately, the general perception has been that the quality of education has been on the decrease. From all indications, it is obvious that the quality of education in Nigeria cannot be attained without a careful study of the ways of improving the teachers' effectiveness. The effectiveness of the teacher is vital in the implementation of the agricultural science programme in secondary schools. Teacher effectiveness in the context of this study means the degree to which the teachers are able to produce the desired result. It is also referred to as condition where the teachers of agricultural science performs their duties which will lead to good performance of the students of agricultural science in both internal and external examinations. To enhance the effectiveness of the agricultural science teachers in the context of this study means to increase, intensify or improve the value, the quality and the degree of performance of the agricultural science teachers to achieve a desirable result in their teaching as well as the performance of the agricultural science students in internal and external examinations. The teacher is the one who plans and assesses needs and utilizes appropriate resources to achieve the desired educational results. If the teachers are not well positioned and taken care of, they will not teach well and the students will not acquire the required skill in agricultural science which will affect the development of agriculture in the country. Experience has shown that many agricultural science teachers are not effective in their classroom. For instance some teachers come to class late and many do not prepare their lesson notes before going to the classroom. This has negatively affected the achievement of the goal of agricultural science. The question is, what are those strategies that could be put in place that would enhance teachers effectiveness in the implementation of agricultural science programme at the secondary schools.

### **Statement of the Problem**

Agricultural science is one of the core vocational courses being offered at the junior and senior secondary schools in Nigerian education system. Experience has shown that many agricultural science teachers in Abakaliki Education zone, teach agricultural science theoretically in the classroom without involving the students in field practicals. Some of the teachers teach with pictures, drawing agricultural specimens instead of using the real life specimens to teach. Furthermore, many agricultural science teachers do not use the school farms in teaching the students; nor go on for excursions to well established agro-farms and industries. The ineffectiveness of the agricultural science teachers has manifested through the poor performance of the students in internal and external examinations. The poor performance of the students in agricultural science due to ineffectiveness of the teachers has also led to non-acquisition of the skills in agricultural production required from a secondary school graduates, and has jeopardized the laudable objectives of agricultural science programme at the secondary school level.

The question is what are the strategies needed to enhance the teachers effectiveness for the implementation of agricultural science programme at the secondary schools. It is on the quest to answer the above question that this topic is chosen for research.

### **Purpose of the Study**

The overall purpose of the study is to determine the strategies that would enhance teachers' effectiveness in implementing agricultural science programme at the secondary schools. Specifically, the study sought to:

1. Determine the strategies for training and retraining of teachers needed to enhance their effectiveness in the implementation of the agricultural science programme at the secondary schools
2. Determine the appropriate incentives needed to be provided to enhance teachers' effectiveness in the implementation of the agricultural science programme at the secondary schools
3. Determine the appropriate teaching methods needed to be used by the teachers to enhance their effectiveness in the implementation of the agricultural science programme at the secondary schools

### **Research Questions**

The following research questions guided the work:

1. What are the strategies for training and retraining of teachers needed to enhance their effectiveness in the

- implementation Agricultural Science programme in secondary schools?
2. What are the incentives that will be provided to enhance the teachers Effectiveness in the Implementation of Secondary School Agricultural Science Programmes
  3. What are the appropriate teaching methods needed to be adopted to enhance the teachers effectiveness in the implementation agricultural science programme at the secondary schools?

### **Null Hypotheses**

The following hypotheses were tested at 0.05 level of significance

**H<sub>01</sub>:** There is no significant difference between the mean ratings of the male and female agricultural science teachers on the appropriate incentives to the teachers needed to enhance their effectiveness in the implementation of agricultural science programme at the secondary schools.

**H<sub>02</sub>:** There is no significant difference between the mean ratings of the male and female agricultural science teachers on the strategies for training and retraining of teachers needed to enhance their effectiveness in the implementation of the agricultural science programme at the secondary schools.

### **Methodology**

This work adopted survey research design which involved the use of questionnaire to obtain information from the respondents. The study was carried out in Afikpo education zone of Ebonyi State of Nigeria. The population of the study was 117 which comprised 84 male and 33 female teachers. Three purposes of study and two hypotheses guided the study. There was no sampling, the whole population was used for the study. The instrument used for data collection was a self-structured questionnaire. The questionnaire had 4 points rating scale of strongly agree, agree, disagree and strongly disagree with their nominal values as 4,3,2 and 1 respectively. The instrument was validated by three specialists in agricultural education and measurement and evaluation from Ebonyi State University. The reliability of the instrument was determined by the use of cronbach alpha which yielded 0.79 reliability coefficient. The instrument had four sections; section "A", B, C and D. section A contained information on the personal data of the respondents, section B elicited information on regular training and retraining of the teachers, section C, elicited information on adequate provision of instructional materials, section 'D' got data on use of appropriate teaching methods. The data for the study were collected by the researcher and 3 research assistants who were given training on how to interact with the respondents. A total of 117 copies of the questionnaires were distributed to the respondents, and out of the number distributed, 110 were retrieved, which represents 94%. The data collected were analysed using mean with standard deviation for the research questions and t-test was used for testing the hypotheses formulated.

In taking decision, 2.50 was used as cut-off point. This cut of point was determined by adding the nominal values of the rating scales and divided by the number of cases. So any item with the mean score of 2.50 and above was regarded as a mechanism that will enhance teachers effectiveness while any item with less than 2.5 was regarded as a mechanism that will not enhance teachers effectiveness. The null-hypotheses were accepted when the t-calculated was less than the t-tabulated and was not accepted when the t-calculated was greater than the t-critical at 0.05 level of significance.

## **RESULTS**

### **Research Question 1**

What are the Strategies for training and re-training of teachers needed to enhance the teachers effectiveness in the implementation of agricultural science programme at the secondary schools

Table 1: Mean Ratings With Standard Deviation of the Respondents on training and re-training of Teachers to Enhance their Effectiveness.

SN	Item statements	SA(4)	A(3)	D(2)	SD(1)	$\bar{X}$	SD	Remarks
1	Training of agricultural science teachers to acquire higher degrees or certificates.	80	13	10	07	3.50	0.90	Agreed
2	Organizing training workshops for the agricultural science teachers	68	24	12	06	3.40	0.89	Agreed
3	Organizing of conferences for the teachers.	70	22	10	08	3.40	0.93	Agreed
4	Re-training of agricultural science teachers for a short time courses within and outside the country on teaching methodologies.	61	32	11	06	3.34	0.87	Agreed
5.	Training of the agricultural science teacher on the use and operation of computer..	60	28	15	07	3.28	0.92	Agreed
6	When agricultural science teachers are given training on the use of power points.	62	17	25	06	3.22	0.98	Agreed
7	Training of agricultural science teachers on the use of internet to assess information.	47	36	21	06	3.12	0.90	Agreed
8	Re-training of teachers of agricultural science on the areas of their specialization to improve their knowledge in modern teaching techniques.	50	28	25	07	3.10	0.96	Agreed
9	Re-training of agricultural science teachers on classroom management.	66	28	13	03	3.42	0.80	Agreed
10	Re-raining of agricultural science teachers on how to source and improve instructional material.	49	25	26	10	3.02	1.02	Agreed
11	Re-training of agricultural science teachers on the utilization of combination of teaching methods.	54	40	10	06	3.29	0.84	Agreed
12	Re-training of agricultural science teachers on how to relate with the students.	26	21	60	03	2.63	0.87	Agreed
13	Training of agricultural science teachers on how to relate with the parents and visitors to the school.	66	30	69	05	3.42	0.82	Agreed
Grand mean						2.97		

The data in table 1 table shows that all the items had their mean scores above the cut off point of 2.50 with their corresponding standard deviations ranging between 0.82 and 1.02. This is an indication that the respondents agreed that training and re-training of teachers enhance their effectiveness on the implementation of secondary school agricultural science programme. The re-training of teachers as agreed by the respondents could be inform of conferences, workshop, seminar and symposia.

**Research Question 2:**

What are the incentives that will be provided to enhance the teachers Effectiveness in the Implementation of Secondary School Agricultural Science Programmes

Table 2: Mean Ratings with Standard Deviations of the Respondents on Provision of Incentives to Enhance the Implementation of Agricultural science Programme.

SN	Item statements	SA(4)	A(3)	D(2)	SD(1)	$\bar{X}$	SD	Remarks
1	Providing free medical service to the agricultural science teachers and their families.	90	11	05	04	3.70	0.72	Agreed
2	Special allowance for agricultural science teachers, eg, subject or hazard.	80	15	10	05	3.54	0.84	Agreed
3	Recognition of agricultural science teachers who are outstanding through award giving.	75	20	11	04	3.50	0.82	Agreed
4	Giving outstanding agricultural science teachers monetary award.	68	29	12	01	3.49	0.72	Agreed
5.	Providing free accommodation for agricultural science teachers.	55	43	07	05	3.34	0.79	Agreed
6	Payment of leave allowance to agricultural science teachers.	45	44	14	07	3.15	0.87	Agreed
7	Regular promotion of the agricultural science teachers.	70	25	10	05	3.45	0.84	Agreed
8	Payment of salary bonus.	40	50	12	08	3.10	0.87	Agreed
9	Provision for salary advance for agricultural science teachers.	62	33	10	05	3.38	0.83	Agreed
10	Granting of short loans with little or without interest.	72	23	13	02	3.50	0.77	Agreed
11	Provision of car loan to the agricultural science teachers.	62	25	20	03	3.32	0.86	Agreed
12	Granting of housing loans to the agricultural science teachers.	56	26	18	10	3.16	1.00	Agreed
13	Regular increment of the salaries of the agricultural science teachers.	68	26	10	06	3.41	0.87	Agreed
	Grand mean						3.38	

Data in table 2 revealed that all the items had their mean scores above 2.50 with the corresponding standard deviation ranging between 0.72 and 1.00. This implies that respondents agreed that provision of incentives such as medical allowances, subject and hazard allowances, recognition of outstanding teachers, monetary awards, free accommodation and prompt payment of leave allowances and others will enhance the effectiveness of the teachers.

### Research Question 3

What are the appropriate teaching methods needed to enhance the teachers effectiveness in the implementation of agricultural science programme at the secondary schools?

Table 3: Mean Rating with Standard deviation of the respondents on the use of appropriate teaching methods to enhance the teachers effectiveness.

SN	Item statements	SA(4)	A(3)	D(2)	SD(1)	$\bar{X}$	SD	Remarks
1	When the teacher adopt discussion method in teaching of agricultural science.	55	50	03	02	3.43	0.64	Agreed
2	When the agricultural science teachers adopt demonstration techniques in teaching.	53	35	17	05	3.23	0.87	Agreed
3	When teachers adopt lecture methods in teaching agricultural science.	43	30	28	09	2.97	0.99	Agreed
4	When the teachers use story method to teach agricultural science.	44	38	21	07	3.08	0.92	Agreed
5.	When the teachers use role playing method in teaching agricultural science.	58	31	15	06	3.28	0.89	Agreed
6	The use of project method in teaching of the agricultural science teachers in teaching.	62	28	13	07	3.31	0.91	Agreed
7	When the agricultural science teachers adopt field trip techniques of teaching.	52	33	20	05	3.20	0.89	Agreed
8	The utilization of problem solving method of teaching by the agricultural science teachers.	51	35	14	10	3.15	0.96	Agreed
9	When the agricultural science teachers adopt individual techniques of teaching method.	54	29	16	11	3.14	1.01	Agreed
10	When the agricultural science teachers adopt combination of teaching methods.	65	20	17	08	3.29	0.98	Agreed
11	The use of collaborating method of teaching by the teachers	53	26	19	12	3.09	1.04	Agreed
12	The use of enquiry method by teachers to teach agricultural science.	52	28	20	10	3.10	1.00	Agreed
13	Using assignment techniques by teachers to teach agricultural science.	61	24	16	9	3.24	0.98	Agreed
Grand mean							3.09	

The data in table 3 reveals that all the items had their mean scores above the cut-off point of 2.50 with their corresponding standard deviations ranging between 0.64 and 1.04. This implies that the use of appropriate teaching methods enhance teachers effectiveness in the implementation of agricultural science programme at the secondary schools.

### Hypothesis I

Table 4: t-test analysis on the mean responses of the respondents on provision of incentives to enhance the implementation of agricultural science programme at secondary schools.

SN	Group	$\bar{X}$	$S_1^2$	N	t-cal	t-tab	Interpretation
	Male Teachers			80			
	Female Teachers			30			
1	Providing free medical service to the agricultural science teachers and their families.	3.07 3.13	0.95 0.94	80 30	-0.30	1.96	*
2	Special allowance for agricultural science teachers, eg, subject or hazard allowance.	2.89 3.00	0.75 0.67	80 30	-0.78	1.96	*
3	Recognition of agricultural science teachers who are outstanding through award giving.	2.88 3.47	0.86 0.63	80 30	-1.70	1.96	*
4	Giving outstanding agricultural science teachers monetary award.	2.94 3.10	0.78 0.66	80 30	-1.14	1.96	*
5.	Providing free accommodation for agricultural science teachers.	3.08 3.44	1.04 0.49	80 30	-2.57	1.96	*
6	Payment of leave allowance to agricultural science teachers.	3.06 3.22	0.94 0.93	80 30	-0.08	1.96	*
7	Regular promotion of the agricultural science teachers.	3.11 3.04	0.77 0.90	80 30	0.41	1.96	*
8	Payment of salary bonus.	3.06 3.34	1.14 0.77	80 30	-1.64	1.96	*
9	Provision for salary advance for agricultural science teachers.	3.04 2.92	0.70 0.85	80 30	0.85	1.96	*
10	Granting of short loans with little or without interest.	2.91 3.08	0.85 0.66	80 30	-1.00	1.96	*
11	Provision of car loan to the agricultural science teachers.	2.82 3.02	0.87 0.72	80 30	-1.17	1.96	*
12	Granting of housing loans to the agricultural science teachers.	2.79 3.01	0.83 0.85	80 30	-0.64	1.96	*
13	Regular increment of the salaries of the agricultural science teachers.	3.05 3.14	1.15 1.05	80 30	-0.45	1.96	*

Note: \* = No significant difference  
 Df = 108

Data in table 4 reveals that all the items had their t-calculated less than the critical t-table of 1.96 at the degree of freedom of 108 at 0.05 level of significance.

Based on this, the null hypothesis was accepted. This signifies that the opinions of the male and the female teachers did not differ significantly on provision of incentives to enhance the teachers effectiveness on implementation of agricultural science programme at the secondary schools.

## Hypothesis II

Table 5: t-test analysis on the mean responses of the respondents on regular training and Re-training of the teachers to enhance the implementation of agricultural science programme at secondary schools.

SN	Group	$\bar{X}$	$S_1^2$	N	t-cal	t-tab	Interpretation
	Male Teachers						
	Female Teachers						
1	Training of agricultural science teachers to acquire higher degrees or certificates.	3.12 4.08	1.03 0.96	80 30	-4.80	1.96	*
2	Organizing training workshop.	2.91 3.94	0.67 0.82	80 30	-0.92	1.96	*
3	Organizing of conferences for the teachers.	2.86 3.18	0.86 0.66	80 30	-1.88	1.96	*
4	Re-training of agricultural science teachers for a short time courses within and outside the country.	2.96 3.08	0.87 0.64	80 30	-0.70	1.96	*
5.	Training of the agricultural science teacher on the use and operation of computer.	3.10 3.29	0.89 0.64	80 30	-1.11	1.96	*
6	When agricultural science teachers are given training on the use of power points.	2.96 3.25	1.08 0.86	80 30	1.70	1.96	*
7	Training of agricultural science teachers on the use of internet to assess information.	3.08 3.04	0.82 0.98	80 30	0.20	1.96	*
8	Re-training of teachers of agricultural science on the areas of their specialization to improve their knowledge in modern teaching techniques.	3.05 3.33	1.11 0.71	80 30	-1.64	1.96	*
9	Re-training of agricultural science teachers on classroom management.	2.97 2.98	0.79 0.77	80 30	-0.07	1.96	*
10	Re-raining of agricultural science teachers on how to source and improve instructional materials.	2.89 3.02	0.94 0.83	80 30	-0.76	1.96	*
11	Re-training of agricultural science teachers on the utilization of combination of teaching methods.	2.81 3.66	0.95 0.73	80 30	-1.47	1.96	*
12	Re-training of agricultural science teachers on how to relate with the students.	2.78 3.04	0.89 0.71	80 30	-1.52	1.96	*
13	Training of agricultural science teachers on how to relate with the parents and visitors to the school.	2.98 3.12	1.13 0.94	80 30	-0.70	1.96	*

Note: \* = No significant difference  
 Df = 108

Table 5 indicate that all the items had their t-calculated less than the t-critical of 1.96 at 108 degree of freedom at 0.05 level of significance. Therefore the null hypothesis was accepted. This implies that the opinions of the male agricultural science teachers did not differ significantly from that of the female teachers on regular training and re-training of the teachers to enhance their effectiveness in the implementation of agricultural science programme at the secondary schools.

## Findings

Based on the analysis of the data, the following findings emanated

1. Provision of incentives enhances the teachers effectiveness in the implementation of the secondary school agricultural science programme.
2. Regular training and re-training of the teachers enhances the teachers effectiveness in the implementation of the secondary school agricultural science programme.
3. The use of Appropriate teaching methods enhances the teachers effectiveness in the implementation of the agricultural science programme at the secondary schools.
4. There was no significant difference in the opinions of the male and the female teachers on provision of incentives and training and re-training of teachers for the enhancement of their effectiveness in the implementation of agricultural science programme in the secondary schools.



## Discussion Of Findings

The analysis of the data revealed that provision of incentives to the teachers enhances the teachers effective in the implementation of the secondary school agricultural science programme. Incentives are something that spore someone to action. Incentives would be monatory, gifts, material gift or non-materials. This finding is in agreement with Azubuike (2003) who reported that incentives such as regular promotion of workers from lower level to higher level makes the worker to put more efforts. This is applicable to teachers. Teachers who are promoted regularly from lower level to higher levels are motivated to implement the objectives of education. Similarly, Jones (1990) reported that financial incentives in the form of bonus, subject allowances, harzadous allowances and leave allowances when given to the teachers, enhances their effectiveness in the implementation of the secondary school agricultural science programmes. This finding is also in line with Olaitan (2001) who reported that teachers will be ready to work where there is reliable pension and gratuity scheme. This is because teachers will like to have something to fall back after retirement in form of pensions. Teachers find it difficult to save money monthly for their maintenance at old age, the only hope they have for survival at retirement period is regular pension and gratuity. So, incentives such as pension and gratuity at retirement enhances the teachers' effectiveness in the implementation of the agricultural science programme at the secondary schools.

The work revealed that regular training and retraining of teachers enhances their effectiveness in the implementation of the secondary school agricultural programme. This finding is in agreement with Robert (2004) who reported that training helps the trainee to impart his abilities and competencies to the learners as well as making the trainee to perform better in his chosen profession. Equally, Collins (1994) reported that training and re-training makes workers to perform better than before they received the training in their job. He further explained that training and re-training of workers such as attending conferences, seminar and symposia make workers more competent and helps them to contribute meaningfully to the development of their organizations and the society at large. In his contribution, Olaitan (2001) explained that re-training of teachers helps to update their skills and at the same time make them to be current, knowledgeable as well as improving their habits, attitudes and their competencies in their chosen profession.

The finding is also in line with Ejue (2002) who reported that refresher trainings of teachers prepare them for the improvement of education and objectives, implementation in the area of pedagogical techniques and classroom management. He went further to explain that training of workers in general makes the workers to be modern instead of being obsolete. He reteriated that when an individual is trained, he acquires more knowledge, skills and competencies which enables him to function accurately in the modern society. Additionally Olaitan (2001) reported that training of teachers increases the teachers productivity, boosts their moral and makes the teachers to develop more interest in the implementation of the educational programmes. This finding is also in agreement with that of Briggs (2000) who reported that for the teachers to be current on their job and apply the latest teaching techniques, they need short time training in their specialized fields. He further stressed that a well trained teacher will not encounter problems in the use of instructional materials and management of the other resources as well as management of students. Robbert (2004) reported that the modern teaching requires the use of modern tools and equipment as well as the use of information and communication technology tools and gadgets such as the computer, power points, overhead projectors, video tapes, microphone, mega-phone, audio-visual equipment to mention but a few. The equipment can only be effectively operated by the teachers only when he is re-trained on the use and manipulation of the equipment. Therefore, retraining of teachers is highly essential in order to empower the teachers skillfully in teaching profession especially these days the professionalization of the teaching profession is required all over the globe Azikiwe (2004). They maintained that teachers who are not involved in regular retraining live with their obsolete ideas in teaching method, such teachers, they said cannot be effective in the current advancement in the technology educational systems.

The study also revealed that the use of appropriate teaching method enhance the teachers effectiveness in the implementation of the agricultural science programmes at the secondary schools. This finding is in agreement with Alfred (2009) who reported that the effectiveness of the teachers will be enhanced if they adopt certain teaching methods such as discussion, problem solving, demonstration, project methods as well as field trips. He explained that discussion method of teaching involves an interaction between the teachers and the students in an exchange of ideas. This method makes the teacher to be effective because, the contributions of the students make the teachers instruction richer.

He further explained that discussion method was used by the Socrates which identifies students problems so as to proffer solution to the identified problems. This method of teaching facilitates the teacher's job and makes class activity to be student-teacher-oriented. This implies that discussion method of teaching creates opportunity for the teacher to learn from the students which will make the implementation of the educational goals easier.

Furthermore, the finding is in agreement with Azubuike (2012) who reported that the use of appropriate method of teaching like demonstration method plays significant role in the teaching of science such as agricultural science. He further stressed that demonstration method makes the teachers job easier and helps the

teacher to demonstrate complex concepts to the learners for better understanding. Additionally, the finding is in line with Omeje (2001) who stated that demonstration method of teaching saves the teachers time and energy and deepens the students understanding as well as internalization of what has been learnt in the teaching process. He further remarked that demonstration method of teaching promotes attention, interest and curiosity of the learners and facilitates the teachers instructions.

Agreeing with the findings, Ndem (2012) explained that one of the appropriate methods of teaching is project method. He advanced that project teaching method makes the learner to practicalize what is taught theoretically in the classroom. He further explained that project method gives the learner insight on what is taught in the classroom and makes the teacher to effectively implement the educational objectives.

Additionally, the finding of this study agrees with Akuma and Okorie (2007) who reported that field trip is one of the appropriate techniques of implementing the educational objectives. He remarked that field trip techniques of teaching enables the learners to feel, touch and see what is being taught. This, he said creates everlasting memory in the learners. He further stressed that field trip is one of the surest ways of enhancing the teachers effectiveness in the implementation of the educational objectives.

The mean scores of the male teachers were compared with the female agricultural science teachers, and the results showed that there was no significant difference between the opinions of the male and female teachers on provision of incentives to teachers to enhance the implementation of agricultural science programme at the secondary schools.

The similarity in the opinions of the male and female teachers may be attributed to the facts that the two groups are in the same teaching profession and have the common knowledge on the subject matter.

The mean scores of the male and the female agricultural science teachers were compared which showed that there was no significant difference in the opinions of the two groups on regular training and retraining of the teachers to enhance their effectiveness in the implementation of agricultural science programme at the secondary schools. The similarity of opinions of the male and female agricultural science teachers might be attributed to the fact that the two groups teach the same subject.

## Conclusion

One of the major challenges in the educational system in Nigeria and in Ebonyi State in particular is the poor implementation of the educational objectives. The implementation of the educational objectives is the sole responsibility of the teachers in the classroom. The study was carried out in Abakaliki education zone using a sample study of 117 agricultural science teachers as the subjects of the study. Empirical analysis of the data collected was carried out using mean statistics for the research questions and t-test was used to test the hypothesis formulated for the study. The result of the study has revealed that if the teachers are provided with the basic incentives, given regular training and re-training such as conferences and workshops, being properly supervised, provided with the adequate instructional materials as well as employment of qualified and experienced teachers coupled with the application of the appropriate teaching methods, the implementation of secondary school agricultural science programme by the teachers will be enhanced.

## Recommendations

Based on the findings of the study, the following recommendations are put forward:

1. The ministry of education in collaboration with the secondary school principals should provide adequate incentives to the agricultural science teachers so that they will do their work well. Such incentives as free medical services, hazard allowances and free house accommodation.
2. The ministry of education of Ebonyi State government should always organize re-training programmes in the form of conferences, workshops and seminars to update the teachers knowledge in the pedagogical techniques in teaching of agricultural science.
3. The agricultural science teachers should be encouraged to adopt the appropriate teaching techniques that suits skill development in agricultural science, such techniques as demonstration method, project method, field trips and discussion methods.

## References

- Akuma, N. and Okorie, O. (2007). Principles and practice of effective teaching. A guide to student teacher. Abakaliki: Salt coast Press.
- Azubuike, S.O. (2003). Strategies for Improving the Productivity of the Agricultural Science Teachers in Secondary schools. Unpublished master Degree Desirtation of Department of Technology and Vocational Education, Ebonyi State University, Abakaliki.
- Alfred, S.D.Y. and Yakubu, U. (2009), Agricultural Science Methods, National Open University of Nigeria . Annual Review Of Psychology. 40 (2) 63-66
- Azikiwe, U. (2004). Teachers registration: The benefits to professionalisation of teaching. A paper presented on

- the awareness seminar on professionalisation of teaching in Nigeria, held in the institute of education, university on Nigeria, Nsukka, November, 8.
- Briggs, T. (2000). *Improving instruction through supervision*. New York: The Macmillan Company.
- Chukwudum, P.O. (1983), How not to lose more teachers. *The Nigeria Observer*, April 23, p. 5
- Collins, C. (1994). *Human factors in automated office*. Chicago: University Press.
- Egwin, G.A. (1982) *New Federal Education Policy Lacks Fundamentals*. *Nigeria Statesman*. October 8, p.12
- Fafunwa, B.A. (1984), *Agriculture In General Education Curriculum*, *The Guardian*, August 1, p.13.
- Federal Republic of Nigeria (2008) *National Policy On Education*. Lagos: NERDC Press.
- Jones, M.R. (1990). *Nebraska symposium on motivation*. Lincoln: University of Nebraska Press.
- Ndem, J.U. (2012). *Agronomic practices and skills in vegetable production (Telfaria occidentalis) for sustaining family income and poverty reduction*. *Ebonyi Technology and Vocational Education Journal*. Department of Technology and Vocational Education Ebonyi State University. 5(1) 35-36.
- Olaitan, S.O. & Mama, R.O. (2001). *Principles and practice of school farm management*. Owerri: Cape Publishers Int'l Ltd.
- Olaitan, S.O. (2001), *Vocational Education And National Manpower Development-Constraints And Strategies*. *Vocational Educator*. 3<sup>rd</sup> ed. University Of Nigeria Nsukka: University Press.
- Omeje, G. O. (2001), *Introduction To General Agriculture (For Schools And Colleges)*. Nsukka: Mike Social Press
- Robert, F.F. (2004). *Supervising and principle of professional management*. New York: Macmillan.