

MOTIVATIONAL INITIATIVE FOR IMPROVING TEACHING AND LEARNING OF AGRICULTURAL SCIENCE IN SECONDARY SCHOOLS IN ENUGU STATE

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Abstract

The study was carried out to identify the motivational initiative for improving teaching and learning of agricultural science in secondary schools in Enugu State. Three research questions guided the study. The study adopted descriptive survey research design. The population for the study was 70 made up of 48 agricultural science teachers and 22 school inspectors from sixteen government secondary schools in Udenu Local Government Area of Enugu State. The entire population was studied due to the manageable size therefore there was no sampling. The instrument for data collection was 32-item structured questionnaire developed from the literature reviewed for the study which was validated by three experts. Cronbach Alpha reliability method was used to determine the internal consistency of the items which yielded an overall coefficient of 0.81. The data collected was analyzed using mean and standard deviation to answer the research questions. The study revealed 15 motivational initiatives which agricultural science teachers need to possess for effective teaching and learning of agricultural science. The study revealed 10 motivational initiatives which the school management could provide for effective teaching and learning of agricultural science in secondary school and 7 motivational initiatives for effective teaching and learning of agricultural science in secondary schools. The study concluded that motivating teachers promotes effective teaching of agricultural science in secondary schools. It was recommended that government should pay salaries, allowances and promote teachers, provide instructional material/facilities, organize conference, seminar and workshops yearly for teachers of agricultural science for effective teaching of agricultural science in secondary schools.

Keywords: Secondary Schools, Teaching and Learning Agricultural Science and Motivational Initiatives

Introduction

Agriculture is an important sector and a significant contributor to the Nigerian economy. To keep the sector relevant and competitive, it is important to invest in the education and training of the next generation of agriculturists through teaching and learning of Agricultural Science. Agricultural Science is the systematic study and application of scientific principles and techniques to improve agricultural practices, enhance agricultural productivity, and ensure sustainability in food production systems (Jayaratne & Deng 2020). Agricultural Science can also be defined as an academic discipline that encompasses the study of agriculture, including crop production, animal husbandry, soil science, agricultural economics, and sustainable agricultural practices (Singh & Verma, 2017). Agricultural science is an important subject in the Nigeria school curriculum as it provides students with knowledge and skills needed in agriculture and prepares them for a career in the agricultural sector (Ogunfowokan & Akpan 2017). The importance of Agricultural Science cannot be over emphasized in our secondary schools

Secondary school is intermediate between elementary school and college and usually offering general, technical, vocational, or college-preparatory courses. In the context of this study, secondary school is the midway between primary and tertiary schools. It is the form of education that students receive after their primary education and or before their tertiary education. To maximize numerous benefits of agriculture to man and the nation, urgent attention should be given to the teaching and learning of agricultural Science in secondary schools.

Teaching and learning are the processes knowledge is imparted and acquired According to Okoro and Eze (2023), teaching and learning is the use of effective pedagogical strategies to engage learners in active exploration, critical thinking, and practical experiences that enhance their understanding of agricultural concepts and prepare them for careers in the agricultural industry. According Asogwa (2014) effective teaching and learning of agricultural science in secondary school will not only inspire the students to develop interest in the subject, it will also give them the sense of contributing to agricultural development. In the

context of this study, teaching and learning is a transformation process of knowledge from teachers to students. To achieve this, it requires a teacher who can deliver the subject matter.

A teacher is one who imparts knowledge to learners. According to Quora (2019), a teacher is a person who provides instruction and guidance to students in a formal setting, such as a school or university. LinkedIn (2023) noted that teacher is a person who facilitates learning and development in others. This can include professionals who work in schools, colleges. Teacher is also a person who impact knowledge to others, engaged in the activities of guiding, modifying, and facilitating changes in the learner's behavior. Therefore, agricultural science teacher is one who has been successfully trained in the art of teaching the subject of agricultural science. In order to improve effectively in teaching and learning, a teacher of agricultural science needs to be motivated.

Motivation is the process that initiates, guides, and maintain goal-oriented behavior. Nwaogwu (2016) defined motivation as a force within a person or animal that drive behavior towards some goals. In this study, motivation refers to the conditions which imitate, guide and maintain behaviors until some goals are reached. For someone to be motivated, the person must develop some initiatives.

Initiative is the capacity and imagination to realize what needs to be done, together with the courage and willingness to do it especially without other's help. It is a willingness to try and solve something. Initiative is the ability to be resourceful and work without always being told what to do. It requires resilience and determination. Some teachers have been trying to make teaching and learning of agricultural science very simple and easy for students with these initiatives. The concept of motivational initiative involves the teacher adopting different strategies to boost the morale of the students towards effective teaching and learning (Osinem, 2014).

Despite all the efforts of teachers in teaching and learning of agricultural science, there is poor attitude of students towards agricultural activities even to other subjects has been posing problems to students and a source to worry to educational stakeholders (Ezeji 2014). Nowadays teachers have to contend with students' problems before learning can take place. Such problems of students include poor interest in agriculture and interest during practical classes.

Agricultural science is a core subject offered by students both in primary and secondary school level, yet the intended outcomes have not been encouraging because of shortage of human and materials resources required for effective teaching of the subject. Among these resources, human resources which represent the agricultural teacher have not been effective due to lack of manpower and this have greatly affected the teaching and learning of agricultural science in secondary schools. Naturally, agricultural science is feared by students because of the practical aspect of it and owing to the fact that agricultural teacher is always the labour master in the school. For these reasons, teachers of agricultural science work under stressful condition both during the practical activities and during manual labour, yet they are poorly motivated by the school authorities and the colleagues. Students lack interest in the subject despite all the efforts of the teachers and this create a big challenge to teachers of agricultural science. A study by Anugwo and Ezenwa (2018) found that only 33% of junior secondary school students in Nsukka had a positive attitude towards agriculture, while 57% had a negative attitude towards the subject. To complement their effort and ensure that students are carried along, there is need to look into the welfare of the teachers with the target of making agricultural science, not only interesting but economically viable to schools. The above assertion therefore warrants the need to identify motivational initiatives for improving teaching and learning of agricultural science in secondary school.

Purpose of the Study

The general purpose of this study was to identify the motivational initiative for improving teaching and learning of agricultural science in secondary schools in Enugu State. Specifically, the study identified to:

1. motivational initiatives which teachers need to possess for effective teaching and learning of agricultural science in secondary school.
2. motivational initiatives which the school management could provide for effective teaching and learning of agricultural science in secondary school.
3. motivational initiative which could be provided by the government for effective teaching and learning of agricultural science in secondary school.

Research Questions

The following research questions guided the study.

1. What are the motivational initiatives which teachers needed to possess for effective teaching and learning of Agricultural science in secondary school?

2. What are the motivational initiatives which the school management should provide for effective teaching and learning of agricultural science in secondary school?
3. What are the motivational initiative which could be provided by the government for effective teaching and learning of agricultural science in secondary school?

Methodology

The study adopted descriptive survey research design and was carried out in Enugu State. Udenu Local Government Area was purposively selected for the study. The total of 70 respondents made up of 48 agricultural science teachers and 22 school inspectors in sixteen government secondary schools in Udenu Local Government Area of Enugu State was used for the study. (PPSMB, Obollo Zone Statistic Unit). The instrument for data collection was a 32 items structured questionnaire developed from the literature reviewed by the researchers titled "Motivational Initiatives for improving teaching and learning of agricultural science questionnaire" (M11TLASQ). Each item in the questionnaire was assigned a four response options of Strongly Agree (SA), Agree (A), Disagree (D), and

Strongly Disagree (SD) with corresponding values as 4, 3, 2, and 1 respectively. The instrument was face-validated by three experts in Agricultural Education, and final draft of the instrument was modified based on experts' suggestions. Cronbach Alpha reliability method was used to determine the internal consistency of the items and overall reliability coefficient of 0.81 was obtained. Data collected were analyzed using mean to answer the three questions and standard deviation to determine the closeness or otherwise of the responses from the mean. For the research question, any item with mean rating of 2.50 and above was regarded as agreed while mean response of less than 2.50 was regarded as disagreed.

Results

The results of the study were obtained from the data collected, analyzed, and presented in Tables 1-3.

Research Question 1: What are the motivational initiatives which teachers needed to possess for effective teaching and learning of Agricultural Science in secondary school?

Table 1: The mean responses of respondents on the motivational initiatives which teachers needed to possess for effective teaching and learning of Agricultural science in secondary school (N=70)

S/N	Item Statement	X̄	SD	Remark
1	Create learning environments for students' participation during agricultural activities	3.05	0.34	Agreed
2	Motivate students to learn agricultural science lesson	3.45	0.54	Agreed
3	Facilitate learning experience that are meaningful to students	3.45	0.56	Agreed
4	Select and utilize a variety of technology that support learning of agricultural engineering	3.21	0.21	Agreed
5	Incorporate students' experiences, real-life situation to agricultural instructions	3.65	0.32	Agreed
6	Demonstrate agricultural science through practical increase the interest of the students in the subject	3.12	0.34	Agreed
7	Follow on-going knowledge and awareness of agricultural content	3.11	0.5	Agreed
8	Appreciate practical assignment given to the students	3.31	0.24	Agreed
9	Allocate time for agricultural practical	3.30	0.45	Agreed
10	Encourage the students to accept responsibility for their own learning.	3.34	0.45	Agreed
11	Cultivate cross cultural agricultural practices	1.90	0.56	Disagreed
12	Exhibit acceptable instructional practices and strategies	3.11	0.32	Agreed
13	Design and implement standard-base agriculture	3.14	0.34	Agreed
14	Provide regular and timely feedback to agricultural students and parents	3.75	0.34	Agreed
15	Provide students of agriculture with access to technology, space, tool and time.	3.67	0.43	Agreed

Key: X̄=Mean, SD= Standard Deviation.

The data presented in Table 1 above indicated that 14 out of 15 items had mean ranged from 3.05 to 3.75 indicating that the respondent agreed to the items as motivational initiatives which teachers needed to possess for effective teaching and learning of agricultural science in secondary school in Udenu Local Government Area of Enugu State. However, item no 11 had mean value of 1.90. The value was below 2.50; indicating that the respondents did not agree to the item as motivational initiatives which teacher need to possess for effective teaching and learning of agricultural science in secondary school in Udenu Local Government Area of Enugu State. The standard deviation of the 14 items ranged from 0.21- 0.56. These

values were less than 1.96 (95% confident level); indicating that the respondents were close to the mean and to each other in their responses, while item number 11 had 0.56 standard deviation which showed that the respondents disagreed as motivational initiatives which teachers needed to possess for effective teaching and learning of agricultural science in secondary school. The standard deviation added value to the reliability of the mean.

Research Question 2: What are the motivational initiatives which the school management could provide for effective teaching and learning of agricultural science in secondary school?

Table 2: The mean of responses of respondents on the motivational initiatives which the school management could provide for effective teaching and learning of agricultural science in secondary school (N=70)

S/N	ITEM STATEMENT	X	SD	Remark
1.	Provide adequate teaching facilities in agricultural subject	3.34	0.45	Agreed
2.	Allow teachers of agriculture to participate in decision making as related to agriculture	3.20	0.32	Agreed
3.	Create and maintain agricultural laboratories and offices	3.12	0.23	Agreed
4.	Supervising properly agricultural teachers' statutory records	3.45	0.34	Agreed
5.	Visiting teachers in classroom and drooping notes on their mailbox about positive and negative actions about agriculture	3.56	0.26	Agreed
6.	Recognizing teachers of agriculture worth	3.50	0.34	Agreed
7.	Providing adequate fund for field trips	3.55	0.57	Agreed
8.	Providing opportunities to teachers of agriculture to seek professional development	3.21	0.25	Agreed
9.	Creating time-off to teachers of agriculture for refreshment and rejuvenation after a tedious work.	1.25	0.35	Disagreed
10.	Celebrating the end term with congratulatory gift including teachers of agriculture	3.29	0.45	Agreed

Key: X=Mean, SD= Standard Deviation.

The data presented in Table 2 above indicated that 9 out of 10 items had their mean ranged from 2.23 to 3.56 indicating that the respondents agreed to items as motivational initiatives which the school management could provide for effective teaching and learning of agricultural science in secondary school. However, item no 9 had mean value of 1.25. The value was below 2.50; indicating that the respondents did not agree to the item as motivational initiative require by teachers of agricultural science for teaching and learning of agriculture in secondary in Udenu Local Government area of Enugu state. The standard deviation of all the 10

items ranged from 0.23-0.56 indicating that the respondents were close to the mean and to each other in the responses. Each of the values was less than 1.96 (95 % confidence level) indicating that the respondents were close to the mean and to each other in the responses. The standard deviation added value to the reliability of the mean.

Research Question 3: What are the motivational initiatives which could be provided by the government for effective teaching and learning of agricultural science in secondary school?

Table 3: The Mean of Responses of Respondents on the motivational initiative which could be provided by the government for effective teaching and learning of agricultural science in secondary school (N=30)

S/N	ITEM STATEMENT	X̄	SD	Remark
1.	Paying salaries and allowances of teachers including teachers of agriculture regularly	3.11	0.30	Agreed
2.	Promoting teachers as and when due including teachers of agriculture	3.34	0.50	Agreed
3.	Providing adequate instructional facilities in the school for agricultural practical	3.23	0.45	Agreed
4.	Organizing conferences, seminar and workshop for teachers including teachers of agriculture	3.12	0.67	Agreed
5.	Granting in-service training without pay to teachers of agriculture	3.06	0.67	Agreed
6.	Providing subsidies to support agricultural productivities	3.56	0.20	Agreed
7.	Sponsoring teacher of agriculture on relevant research.	2.23	0.35	Agreed

Key: X̄=Mean, SD= Standard Deviation.

The data presented in Table 3 above indicated that 6 out of 7 items had their mean ranged from 3.06-3.56 indicating that the respondents agreed to items as a motivational initiative which could be provided by the government for effective teaching and learning of agricultural science in secondary school. However, item no 7 had mean value of 2.23. The value was above 2.50; indicating that the respondents did not agree to the item as a motivational initiative which could be provided by the government for effective teaching and learning of agricultural science in secondary school. The standard deviation of all the 7 items ranged from 0.20-0.67. Each of the values was less than 1.96 (95 % confidence level) indicating that the respondents were close to the mean and to each other in the responses. The standard deviation added value to the reliability of the mean.

Discussions of the Findings

The results obtained from Table 1 revealed that creating learning students, select and utilize a variety of technology of technology that supports students learning of agricultural engineering, incorporate student's experiences, real-life situation to agricultural instruction, demonstrate agriculture through practical increase the interest of students in the subject, follow on-going knowledge and awareness of agricultural content, appreciate practical assignment given to the students, allocate time for practical agriculture among others, as motivational initiatives which teachers needed to possess for effective teaching and learning of agricultural science in secondary school. The findings of the study agreed with Agukogbuo (2014) who found that a professional teacher must command a body of knowledge and skills that are essentially intellectual to students.

Results from Table 2 showed provision of adequate teaching facilities in agricultural subject, allowing teachers of agriculture to participate in decision

making as related to agriculture, creating and maintaining agricultural teachers' satisfactory records, visiting teachers in class room and dropping notes on their mail box about positive and negative actions agriculture, recognizing teachers of agriculture worth among others as motivational initiatives which the school management could provide for effective teaching and learning of agricultural science in secondary school. These findings are in line with Mooregie and Igwe (2012) who agreed with the result stated above that inadequate funding has resulted in poor teaching and dilapidated buildings. The facilities will enable teachers to convey his intended message effectively and meaningfully to the learners.

Results from Table 3 revealed that paying salaries and allowances of teachers including teachers of agricultural science regularly, promoting teachers as and when due, providing adequate instructional facilities in school for agricultural practical, organizing conferences, seminar and workshop for teachers including teachers of agriculture, granting in-service training without pay to teachers of agriculture among others as motivational initiative which could be provided by the government for effective teaching and learning of agricultural science in secondary school. The findings agree with National Union of Teachers (2012) which stated that with the salary increase and harmonization of conditions of service or fulfilment payment of these allowances, teachers will now appear to be motivated by these improved conditions. This is true because poor salary and inadequate working conditions have been the main source of teachers, frustration in schools.

Generally, for teachers of agricultural science to be effective in discharging their duties, they should be knowledgeable in their subject matter. Also, parent, schools, and government should give supporting hand.

This will help to improve teachers' performance in agricultural science in our secondary schools.

Conclusion

The importance of motivation in place of work cannot be over emphasized. Motivation of agricultural science teachers mostly lies in the hands of the teachers, school authorities, government among others. In schools, there are inadequate teaching facilities in agricultural subject, teachers not participating in decision making as related to agricultural science, no recognition of teachers worth, no room for teachers to seek for their professional development among others. All these demoralize teachers work; therefore, for effective teaching and learning of agricultural science in schools, these problems among others should be addressed properly. This will help to improve teachers' performance in agricultural science in our secondary schools.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. Teachers of agricultural science should create learning environments for students' participation during agricultural lessons and practical, facilitate learning experiences that are meaningful to the students.
2. The school management should provide adequate teaching facilities in agricultural subject, recognize, and allow teachers to take part in decision making as relating to agricultural science.
3. Government should pay salaries, allowances and promote teachers, provide instructional material/facilities, organize conference, seminar, and workshops yearly for teachers of agricultural science for effective teaching of agricultural science in secondary schools.

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