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# **Research** Article

# CONSTRAINTS ENCOUNTERED IN TEACHING PRACTICAL AGRICULTURE IN SELECTED SENIOR HIGH SCHOOLS IN THE SEKONDI-TAKORADI METROPOLIS

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| ARTICLE INFO  | ABSTRACT  |
|---|---|
| Article History:<br>Received 16 <sup>th</sup> April 2016<br>Received in revised form<br>25 <sup>th</sup> May 2016<br>Accepted 29 <sup>th</sup> June 2016<br>Published online 31 <sup>st</sup> July 2016 | The aim of this study was to find out the constraints encountered in teaching of practical agriculture in the Senior High School within the Sekondi-Takoradi Metropolis. The study adopted the descriptive survey research design. The research population was 150 students and 10 Agricultural Science teachers. The proportional and convenient sampling techniques were used in selecting the students and teachers respectively. Data was collected using questionnaire. The questionnaire was made up of both open and close-ended questions. Descriptive statistical techniques such as frequencies and   |
| <i>Keywords:</i><br>Agricultural science,<br>Equipments,<br>Funds,<br>Practical work,<br>Teaching.  | percentages, pie charts, bar graphs as well as independent samples t-test and one-way between groups<br>ANOVA were employed in analyzing the data gathered. The Statistical Packages for Social Sciences<br>(SPSS) version 21.0 was the software that was used in the data analysis. The findings of the study<br>revealed that practical teaching of Agricultural Science in the Senior High Schools was greatly<br>impeded by the non-existence of the following: lack of school garden, animal farm, educational trips,<br>demonstration plots, and well-equipped laboratory. Also, lack of funds was found to be the major<br>challenge to practical work in Agricultural Science in the Senior High Schools. Based on the findings<br>of the study, the government, Parent Teacher Association (PTA) and other stakeholders should help in |
|   | providing the needed resources such as school garden, animal farm, demonstration plots, well-<br>equipped laboratories among others to facilitate the teaching and learning of Agricultural Science in<br>the schools.  |

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## **INTRODUCTION**

Agriculture is undeniably the mainstay of most developing countries including Ghana. In Ghana, the agriculture sector is among the major contributors of the country's gross domestic product (GDP). In terms of employment, many of the country's economically active population are found within the Agricultural sector. Succinctly, Agriculture employs over 60% of the nation's economically active population. These include farmers, farm labourers, traders of agricultural produce, and workers of agricultural processing companies among others. According to the Ministry of Food and Agriculture

[MOFA] (2009), the Agricultural sector is particularly critical for women. About half (48.7%) of the economically active women population are employed in the various sections within the Agriculture sector with the majority of them being engaged Additionally, the contribution of the in food production. Agricultural sector to Ghana's revenue base cannot be overemphasized. This is mainly through export duties on agricultural commodities, particularly on cocoa and other nontraditional exports. For instance, in 1990, the export of cocoa alone accounted for about 45% of total foreign exchange earned by Ghana. Among the priorities of past and present governments have been the need to reduce poverty, ensure food security, and modernize the Agriculture sector through the application of modern technology so as to make the Agricultural sector a catalyst for rural transformation in line with the goal set for the sector in Ghana Poverty Reduction Strategy (GPRS I) (Ministry of Food and Agriculture, 2009). These aims, in part,

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led to the introduction of the Youth in Agriculture Programme under the Ministry of Food and Agriculture in the year 1999 with the aim of mobilizing and encouraging the youth to take up faming and other agricultural-related activities as a vocation. In addition, the Food and Agriculture Policy (FASDEP) was developed by the government to guide development and interventions in the agriculture sector. The first Food and Agriculture Sector Development Policy (FASDEP I) was formulated in 2002 as a holistic policy, building on the key elements of Accelerated Agriculture Growth and Development Strategy (AAGDS), and with a focus on strengthening the private sector as the engine of growth. Agriculture is regarded as one of the pillars for human survival. This has led to introduction of Agricultural Science education across all levels of education. In the United States for instance, formal programmes in Agricultural Science are pursued in secondary schools, community colleges as well as the universities. The situation is not different in Africa, especially in Ghana. As a vocational educational program, Agricultural education focuses on three major components. These are formal classroom instruction, career experience programmes, and leadership development (Lloyd and Osborne, 1998). According to Abalu (2001), the rationale for the introduction of Agricultural Science education, particularly in the various secondary schools was to dispel the apparent negative students' attitude towards faming, and to further expose students to the knowledge and skills that they would require in agricultural production, should they become farmers one day. Among the aims of the Agricultural Science programme in the Senior High School are to help learners develop self-reliance in agriculture, demonstrate that farming is a dignified and profitable occupation, and to enhance needed in carrying out agricultural practices skills (Vandenbosch, 2006). This is to develop occupational outlook in agriculture and to enable schools to take an active role in national development through agricultural activities. In 2010, the Chief Examiner's Report on Agriculture Science indicated that fundamentals of agriculture and knowledge of practical agriculture were ignored by students (West Africa Examination Council [WAEC], 2010). The report further stated that most students failed to perform simple experiments. A similar observation was indicated in the 2011 report, which added that it appeared most students never stepped into a laboratory during the course of study. This phenomenon could be attributed to the fact that teachers have little understanding of the use of teaching aids and does not employ the use of teaching and learning aids in their lesson delivery. It is against this background that this research sought to investigate the constraints encountered in teaching of practical agriculture in the Senior High Schools.

## **MATERIALS AND METHODS**

This study adopted the descriptive sample survey research design. The study selected a sample size of 150 students and 10 teachers. Only form three and two students took part in study. The reason is that only these two classes were available at the time of the study. The proportional sampling technique was adopted in the selecting the students while the convenient sampling method was adopted in selecting the teachers. The proportional sampling technique was adopted in selecting the students because the Agricultural Science class of some of the schools was relatively bigger than others. In all, sixty (60), Fifty (50), and Forty (40) were randomly selected from Sekondi College, Diabene Senior High School, and Methodist Senior

High School respectively. Questionnaires were the instrument used for the data collection. Two sets of questionnaire were used, thus one for the students and the other for the teachers. The questionnaires comprised both close-ended and open-ended items. Most of the questions required the respondents to respond by ticking the appropriate column. The respondents were, however, required to write their responses where applicable. Before the research, a pilot test of the questionnaires was done in one school which was not within the samples selected but in the Sekondi-Takoradi Metropolis. The pretesting was done to correct some shortcomings associated with the instrument to further ensure that the tool would collect the desired data and that the questions were clear. After analyzing data from the pilot study, questions which were not clear were rephrased to ensure that appropriate responses would be obtained.

#### **Data Analysis**

The data collected from the respondents were processed and analyzed using Computer based Statistical Package for Social Sciences (SPSS) version 21.0 for windows based on the study objectives and the research questions. Descriptive statistics specifically, frequencies, percentages, mean, and standard deviation and bar graph an pie chart as well as independent samples t-test and one way Analysis of Variance were used is determining the direction of the responses. Also, bar chart was used. Statistical significance was tested at 0.05 level of significance or 95% confidence interval.

#### **RESULTS AND DISCUSSION**

#### **Demographic Information**

Section A of both the students' and teachers' questionnaires sought to obtain information on their demographic characteristics. The results presented in Figure 1, 2, 3, and 4.

#### **Demographic Information of Students**

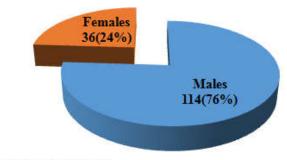
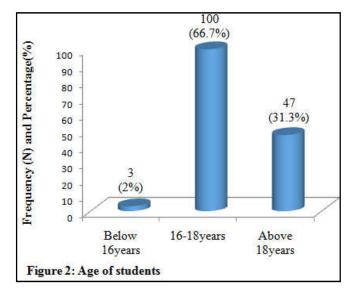


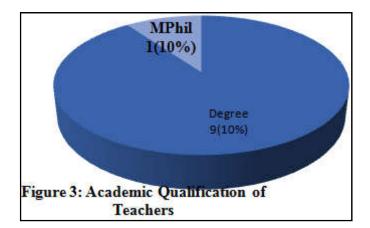
Figure 1: Sex of students

Results from Figure 1 indicate that male students dominated the study population compared to their female counterparts. The presence of more male students than females in the study population could be attributed to the general apathy that Ghanaian female students have in pursuing science and science-related programmes in the various educational institutions. Therefore, more female students need to be encouraged to take up science-related programmes through, say, the provision of scholarships. This will to large extent motivates more female students to pursue science-related programmes in

the various institutions. This will consequently help in addressing the imbalance in terms of male to female ratio that is usually found in the various science-related fields in the country.

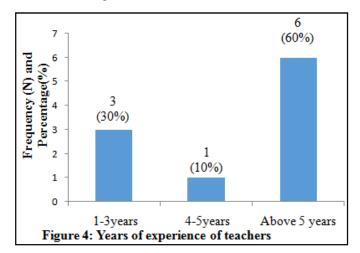


It is evident from Figure 2 that majority of the students pursuing Agricultural Science in the Senior High Schools were between the ages of 16 to 18. Per the Ghanaian educational system, the results as observed from Figure 2 could be termed as not out of the ordinary. The present structure of Ghana's education system consists of 6years of primary education, 3years of Junior High School, 3years Senior High School and 4years University degree, 3years High National Diploma (HND) or courses at other tertiary institutions. Common observations indicate that most children get to class one at the age of six and seven. Adding the 9years of basic education to this age will mean that the child might probably be around 15 and 16 years old before he or she completes the Junior High School. Therefore, by the time he or she gets to the second year in the Senior High School, he or she would most likely not be less than 16years.



The results from Figure 3 imply that the Agricultural Science teaching force in the Senior High Schools is dominated by holders of Bachelor's Degree. The results is not very surprising as Bachelor's Degree is ideally the minimum academic qualification that one should possess to be qualified to teach at the Senior High School level in Ghana. In relation to the number of years taught, it was found that most of the teachers 6(60%) had taught for not less than 5 years, which could mean that they had acquired some level of experience. Fonseca and

Conboy (2006) are of the view that teaching experience (as represented by number of years of teaching) and teaching qualification are positively correlated with student achievement. This means when provided with the needed teaching and learning resources, these teachers could deliver as expected as have a bank of experience under their belt.



# Research Question One: What is the main teaching method adopted by teachers in teaching Agricultural Science?

Research question one sought to find out the main teaching method adopted by the Agricultural Science in their teaching. The results are presented in Table 1.

#### Table 1. Main teaching method adopted by teachers in Agricultural Science

| Teaching Method     | Frequency (N) | Percentage (%) |
|---------------------|---------------|----------------|
| Demonstration       | 1             | 10             |
| Lecture             | 7             | 70             |
| Discussion          | 1             | 10             |
| Hands-on experience | 1             | 10             |
| Total               | 10            | 100            |

Source: Field Data.

Results from Table 1 shows most of the Agricultural Science teachers in the Senior High Schools adopt the lecture method of teaching. The results are in consonant with Ofoegbu (2015) who opines that in most cases, agricultural science teachers are fond of using conventional methods, particularly the lecture method in teaching agriculture in secondary schools. The lecture method is, however, criticized as ineffective as it turns the learners into passive participants in the teaching and learning process though it is useful in covering large content (Costello, 2001). According to Daluba (2013), the lecture method causes the teacher to dominate the teaching-learning process with very little participation on the part of the learners. Daluba (2013) therefore recommends a more interactive teaching method such as the demonstration method as it(the demonstration method) is found to have a significant effect on students' achievement compared to the conventional lecture method.

#### Research Question Two: To what extent are funds available for the acquisition of practical teaching and learning resources for Agricultural Science?

Research question two sought to examine the degree to which funds are available for acquisition of resources for practical work in Agricultural Science. The results are presented on Table 2. Results from Table 2 indicate that the supply of resources for practical lessons in Agricultural Science in the Senior High is greatly hindered by lack of funds. The Agriculture Science subject involves a lot of practical activities. Therefore, lack of funds to acquire the needed teaching and learning resources for practical work will impede the effective teaching and learning of the subject. According to Awuku *et al.* (1991), lack of textbooks, poor management, and poor funding are among the factors that impede the teaching and learning of Agricultural Science. Similarly, Ssekamwa (2009) posits that lack of funds and inadequate funds to run practical education have reduced the effectiveness of undertaking practical education in subjects like agriculture.

Thus, leading to theoretical instruction of Agricultural Science in many schools. According to Government of Ghana (2003), schools have inadequate funds to provide all the necessary materials for practical work. Some also have no school farm. This situation had reduced teaching of practical subjects like agriculture into a theoretical exercise. UNESCO (1999) observed that lack of financial resources hindered the expansion of facilities which led to specific problems in vocational subjects like Agricultural Science. In some cases the courses apparently are largely limited to theoretical classroom presentation because of lack of farmland. Those that have farmland also mostly experience shortage of simple farm tools, irrigation equipment and consumables such as fertilizers. All these require a lot of funds, without which it is not possible to build sound attitudes to farming since the practical aspect cannot be provided. Wootoyitidde (2010) posits that Agriculture as a practical subject requires facilities like land, equipment and a well-equipped laboratory. These facilities demand a lot of funds which many schools are not able to afford, hence making it difficult for such schools to undertake the needed practical work in Agriculture. It is essential for students to learn and practice skills in a good quality school farm. However, in most cases this is not possible because the schools do not have good quality farms due to inadequate funds (Erongu, 1995).

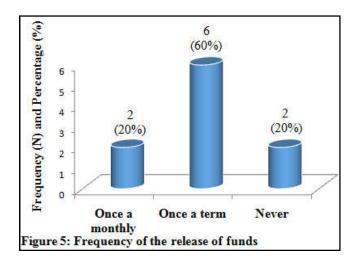
#### Research Question Three: What is the major challenge that hinders the supply of teaching-learning resources for Agricultural Science in the Senior High Schools?

Having examined the degree to which funds are provided in support of Agricultural Science education in the Senior High Schools.

The researcher further sought to determine the main challenge that inhibits the supply of teaching-learning resources for Agricultural Science in the Senior High Schools. The results are presented in Table 3. Results from Table 3 indicate that lack of funds is the major challenging that inhibits the supply of resources for Agricultural Science Education in the Senior High Schools. The finding lends credence to a submission of Kalvango (1998) that financial constraints or budget cuts inhibit the effective functioning of various educational institutions. Also, according to Itodo (2004), most schools faced a lot of challenges when it comes to practical work in Agricultural Science. Most of these challenges are in connection with lack of funds. Wootoyitidde (2010) posits that Agriculture as a practical subject requires facilities like land, equipment and a wellequipped laboratory. These facilities demand a lot of funds which many schools are not able to afford, hence making it difficult for such schools to undertake the needed practical work in Agriculture.

# Research Question Four: How often are funds released for Agricultural Science activities in the Senior High Schools?

The researcher was again interested in finding out how frequent funds are released for Agricultural Science related activities in the Senior High Schools. The results are captured in Figure 5.



Results from Figure 5 show that fund for Agricultural Science activities are not released within short time intervals. This implies that the Senior High Schools, in most cases, have no option than to wait till the beginning of every term before they

| Table 2. Availability of funds for the acc | uisition of resources for the <b>1</b> | oractical teaching and learning | g of Agricultural Science |
|--|--|---------------------------------|---------------------------|
|  |  |                                 |                           |

| Item  |    | Available |    | Unavailable |    | Total |  |
|---|----|-----------|----|-------------|----|-------|--|
|   | No | %         | No | %           | No | %     |  |
| The purchase of farm tools, implements, and other equipment | 2  | 20        | 8  | 80          | 10 | 100   |  |
| Educational trips   | -  | -         | 10 | 100         | 10 | 100   |  |
| Agricultural Science exhibition programmes                  | 3  | 30        | 7  | 70          | 10 | 100   |  |
| Acquisition/ preparation of land for school farm            | 4  | 40        | 6  | 10          | 10 | 100   |  |
| Laboratory instruments and equipment                        | 4  | 40        | 6  | 10          | 10 | 100   |  |
| Teaching aids such as audio-visuals                         | 5  | 50        | 5  | 50          | 10 | 100   |  |

Source: Field Data

Table 3. Main challenge that hinders the supply of resources for the teaching and learning of Agricultural Science in the Senior High School

| Factors                                      | Frequency<br>(N) | Percentage (%) |
|--|------------------|----------------|
| High cost of materials                       | 1                | 10             |
| Unfair allocation of resources in the school | 2                | 20             |
| Lack of funds                                | 7                | 70             |
| Total  | 10               | 100            |

Source: Field Data

can undertake any proper Agricultural activity that demands some form of funding. This situation does not augur well for the effective teaching and learning of Agricultural Science in the Senior High Schools. Senior High Schools. The results are presented on Table 4. Results from Table 4 imply that practical lessons in Agricultural Science in the Senior High School are bedeviled by lack of school garden, animal farm, educational trips, demonstration

Table 4. Availability of facilities and resources for practical work in Agricultural Science

| Item  |    | Available |     | Unavailable |     | Total |  |
|---|----|-----------|-----|-------------|-----|-------|--|
|   | Ν  | %         | No  | %           | No  | %     |  |
| Practical instructional aids such as audio-visuals          | 79 | 52.7      | 71  | 47.3        | 150 | 100   |  |
| School garden   | 45 | 30        | 105 | 70          | 150 | 100   |  |
| Animal farm   | 42 | 28        | 108 | 72          | 150 | 100   |  |
| Educational trips   | 20 | 13.7      | 130 | 86.7        | 150 | 100   |  |
| Demonstration plots   | 62 | 41.3      | 88  | 58.7        | 150 | 100   |  |
| Well-equipped laboratory for Agricultural Science practical | 59 | 39.3      | 91  | 60.7        | 150 | 100   |  |

Source: Field Data

Table 5. Differences in the availability of teaching and learning resources among Senior High Schools

|                | Sum of squares | df  | Mean square | F    | Sig. |
|----------------|----------------|-----|-------------|------|------|
| Between Groups | .668           | 2   | .344        | .744 | .477 |
| Within Groups  | 66.025         | 147 | .449        |      |      |
| Total          | 66.693         | 149 |             |      |      |

\*Significant, p < 0.05

#### Table 6. Attitude of students towards Agricultural Science

| Statements  |     | YES  |    | NO   |     | ſAL |
|---|-----|------|----|------|-----|-----|
|   | No  | %    | No | %    | No  | %   |
| I have interest in studying the Agricultural Science.   | 137 | 91.3 | 13 | 8.7  | 150 | 100 |
| see Agricultural Science as one of the valuable subjects in the Senior High School.           | 133 | 88.7 | 17 | 11.3 | 150 | 100 |
| I find the various topics under Agricultural Science interesting.                             | 136 | 90.7 | 14 | 9.3  | 150 | 100 |
| I intend to have a career in Agriculture.   | 120 | 57.3 | 64 | 42.7 | 150 | 100 |
| I love farming.   | 115 | 76.7 | 35 | 23.3 | 150 | 100 |
| I love Agricultural Science lessons.  | 137 | 91.3 | 13 | 8.7  | 150 | 100 |
| I willingly chose to read Agricultural Science in the Senior High School.                     | 139 | 92.7 | 11 | 7.3  | 150 | 100 |
| Practical lessons in agriculture are important in order to understand the content of subject. | 134 | 89.3 | 16 | 10.7 | 150 | 100 |

Source: Field Data

Table 7. Differences in male and female students attitude towards Agricultural Science

| Item                                  | Sex    | Freq. | Mean | Std. Dev. | t   | df  | Sig. | (2-tailed) |
|---------------------------------------|--------|-------|------|-----------|-----|-----|------|------------|
| Attitude towards Agricultural Science | Male   | 114   | 3.11 | .346      | 953 | 148 |      | .345       |
|                                       | Female | 136   | 3.19 | .467      |     |     |      |            |
| *Significant, p < 0.05                |        |       |      |           |     |     |      |            |

According to Omaren (1998), lack of funds to acquire educational facilities hinder the practical teaching of Agricultural Science and stimulation of food production as these activities depend on the timely availability of funds. The results of current study corroborates a study conducted by Wootoyitidde (2010) among selected secondary schools in Rakai District, Uganda which established that funds were generally not available for Agriculture Science practical. The same study also found that even where funds were available, they were not adequate for agriculture practical. Additionally, it was established that funds were not released on time whenever they were required for practical.

#### Research Question Five: To what extent are teaching and learning resources available for practical work in Agriculture Science in the Senior High Schools?

The effective teaching of any practical concept in Agricultural Science hinges on the availability of the required teaching and learning resources. Therefore, the researcher was interested in assessing the extent to which some of the required practical teaching and learning resources or facilities are available in the plots, and well-equipped laboratory. Owino et al. (2015) posit that the availability of teaching-learning resources enhances the effectiveness of schools as these are the basic things that can bring about good academic performance in students. According to Shiyam and Inyang-Abia (2011), the level of availability of Agricultural Science facilities in the school has significant influence on students' attitudes towards the subject. Mutai (2006) asserts that learning is strengthened when there are enough reference materials such as text books, exercise books, teaching aids and classrooms. Lack of required resources as observed in the Senior High could have a great toll on the students' overall performance in Agricultural Science. Again, the findings agree with an assertion by Amuah (2009) that common challenges bedevilling the agricultural practical lessons in developing country include: inadequate facilities, low professional and efficiency levels of teachers, poor attitudes of teachers, poor funding, poor attitude of school administrators and parents towards agricultural education, and political lapses. Moreover, the findings of this study compare well with findings of a study conducted by Kidane and Worth (2013) that the teaching and learning of Agricultural Science was greatly impeded by lack of fields for practical experience, laboratories,

and libraries to facilitate learning. The authors again indicated that the availability and utilization of instructional materials during agricultural science lessons positively influenced the students' attitudes towards the subject. A recent study conducted by Darko, *et al.* (2015) revealed among others that frequent use of lecture method in teaching, inadequate teaching and learning materials and their availability, and difficulty in planning field trips were the challenges to effective teaching and learning of Agricultural Science in the Senior High Schools.

#### Research Question Six: Is there a statistically significant difference in the availability of teaching-learning resources for practical work in Agricultural Science among Senior High Schools?

Research question six sought to determine whether or not differences exist in the availability of teaching and learning resources for Agricultural Science, and to further determine the significance level of such a difference, if exist. A one-way analysis of variance was conducted to that effect after the various responses to each of the items found under the availability of resource were scored and added for each respondent. The result of the one-way between groups analysis of variance (ANOVA) is presented on Table 5. Results of the one-way between groups analysis of variance as observed on Table 5 indicate that was no statistically significant difference in the availability of teaching-learning resources among the three schools studied. The findings disagree with an assertion by Ojoawo (1990) that there has always been a common feature of differing allocation of facilities to schools. To him, certain schools are favoured than others. Also studies conducted by Woessman (2001); Alimi (2006) revealed a significant difference in facilities available between public and private schools. However, it must be noted that the current study made use of only public schools. This might have probably contributed to the insignificant difference observed in the oneway between groups ANOVA results as contained on Table 5. The reason is that the public schools that were selected for the study largely shared similar characteristics. Notwithstanding, the findings of this study concur with findings of a study conducted by Owoeye (2011) in Ekiti state of Nigeria, which showed no significant difference between rural and urban secondary schools in terms of availability of library facilities, availability of textbooks, availability of laboratory facilities.

#### Research Question Seven: What is the attitude of Senior High School Students towards Agricultural Science?

Research question 7 sought to determine the attitude of students towards Agricultural Science in the Senior High School. The results are presented on Table 6. Results from Table 6 generally indicate that the Senior High School students have a positive attitude towards Agricultural Science. The results of this study are in consonant with findings of Kidane and Worth (2013) who found a favourable positive attitude of students towards farming and studying Agricultural Science in the secondary school. On the same note, Njoroge & Orodho (2014) assert that Senior High School students have a positive attitude and interest towards the Agriculture Science subject though the teaching and learning of the subject is constrained by inadequate instructional resources such as tools, demonstration lands and other agricultural equipment. Notwithstanding, the findings of this study disagrees with FAO (1997) that students prefer other

subjects to Agricultural Science. As a result, students enroll in Agricultural Sciences only when they are unable to undertake alternative subjects or programs of study. In the present study, 139(92.7) of the students stated that they willingly chose to read Agricultural Science. Again, the findings of this study are in contrast with studies done by Lone (2007) that students do not want to enroll for agriculture rather they would prefer to enroll for other optional subjects such as computer studies, business studies, art and design and technology. According to Orodho (2014), some students are of the perception that Agricultural Science has no future prospects for them. Others also believe that Agricultural Science is not as important as Mathematics and English Language which they view as core subjects needed to get employment or admission into tertiary institution. However, in the current study, 133(88.7%) of the students were of the view that Agricultural Science is one of the valuable subjects in the Senior High School. A recent study conducted by Darko et al. (2015) found that many students do not have interest in Agricultural Science. This study further revealed that the students' disinterest in the subject was principally due to their wrong perception about Agricultural Science, thus Agriculture Science is not a well-paid job and also farmers do not have prestige. In contrast, results of the present study show that 115(76.7%) and 120(57.3) indicated that they love farming, and intend to have a career in Agricultural Science respectively.

# Research Question Eight: Is there a statistically significant difference in students' attitude towards Agricultural Science between males and females?

Research question eight sought to examine whether or not there exists a statistically significant difference between the attitude of male and female students towards Agricultural Science. The results are presented in Table 7. Results of the independent samples t-test as found on Table 7 reveal that the attitude of male and female students towards Agricultural was not significantly different from another. In other words the mean score of attitude for males (Mean=3.11, SD=.346) and females (Mean=3.19, SD=.467) were not statistically significant from each other at 0.05 level of significance; t(148)=.346, p=.345, two tailed. In tune with the findings of this study is a study conducted by Olashinde and Olatoye (2014) in Nigeria which concluded that there was no difference between male and female students' attitude to science though the female displayed a higher positive attitude than males towards science. The findings disagree with a study conducted by Shiyan and Inyang-Abia (2011) which revealed that the male students' attitude towards the Agricultural Science subject was significantly higher than that of the females. Further, the findings of this study refute a claim by Soboyejo, (2007) that there is male students have a little more positive attitude than the female students towards science. In the present, however, the attitude of the females (Mean=3.19, SD=.467) was found to be a little higher than that of the males (Mean=3.11, SD=.346) though the difference observed was not statistically significant.

#### Conclusions

The findings of this study therefore imply that:

• Agricultural Science teachers in the Senior High School feel more comfortable using the lecture method of teaching than the other methods of teaching.

- Agricultural Science activities in the Senior High Schools are greatly hindered principally by lack of funds.
- Lack of school garden, animal farm, educational trips, demonstration plots, and well-equipped laboratory greatly impede practical work in Agricultural Science in the Senior High Schools.
- Students in the Senior High Schools have positive attitude towards Agricultural Science. Also, the attitudes of female and male students towards Agricultural are the same.

Hence we recommend that

- Agricultural Science teachers should be encouraged to adopt more interactive teaching methods like discussion and demonstration as these styles help students to get more involved in the teaching and learning process compared the lecture method. The lecture usually causes students to be pretty passive in the teaching and learning process, a situation which does not really promote students' understanding.
- The government, Parents Teachers Association (PTA) and other stakeholders should help in providing the needed resources such as school garden, animal farm, demonstration plots, well-equipped laboratories among to facilitate the teaching and learning of Agricultural Science in the schools. In other words, there is the need to establish and appropriately re-source laboratories and provide land for practical lessons in Agricultural Science in the Senior High Schools.
- The Ministry of Education should allocate special grants to schools offering vocational subjects like agriculture. This will help to alleviate the problems faced by such in terms of funding.
- Students' interest in the subject should be sustained through the provision of Agricultural Science facilities and learning resources. The provision of these facilities and resources will create a conducive environment for the continuous development of interest and skills in Agricultural Science.

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