



## An Assessment of Impediments to Teaching and Learning of Agricultural Science. A Case Study of Some Selected Secondary Schools in Lafia LGA Nasarawa State

Timothy Yusuf, Ikara, A. M., Muhammed H. K.  
Department of Agricultural Education,  
Federal University of Education, Zaria, Kaduna, Nigeria

### ABSTRACT

*The study sought to find out the impediments to students' academic performance in agricultural science in some selected secondary schools in Lafia Nasarawa State. Among the specific purposes of the study were, to determine the present impediments to teaching/learning of agricultural science in secondary schools, to determine the facilities available for the teaching/learning of agricultural science in secondary school, to determine the strategies to be adopted for improving the teaching and, learning of agriculture. The study adopted descriptive survey research design and area of the study were ten (10) Secondary school in Lafia local government of Nasarawa State. The population of the study was made up of (100) hundred respondents. The instrument for data collection has 22 items structured questionnaire design to elicit information to answer the research question. The problem of interest in choosing agriculture as a career appears to be due to inadequate learning of teacher and learning process in Nigeria secondary schools. Data for the study was personally collected by the researcher and a trained research assistant while mean statistic and standard deviation were used to analyze the data relating to the research question 1-3 based on the finding of the study, the researcher recommends the following major area which if will be implemented by the state government, ministry of education and school administration, the present impediments to students' academic performance in agricultural science will be reduce to bears minimum or completely eliminated in secondary schools. The present impediments to proper teaching and learning of agricultural science affects the improvement of skill acquisition.*

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### INTRODUCTION

The challenges facing the teaching and learning of agricultural science in secondary schools in Nigeria revolves on ways and means of providing effective vocational training that will meet the need for effective skills acquisition in our schools. These challenges are derived from the Government desire, not only for well-being of the students but for overall socio-economic development of the nation. (Judith, 2020)

The present changes in the economic fortunes of Nigeria are the inability of secondary

schools to equip graduate with the job entry skills (James, 2017): Nigeria, now that is undergoing industrial and technological development. The most concern is to prepare youths for employment through secondary school level, an acceptable to serve themselves and the nation in the outlet capacity. This posture must be adopted because more youths are demanding for education which prepares them for jobs and because the society is of willing to support education, (Adeyemo, 2020). Based on the provision of National Policy on Education, the society has long accepted

Corresponding author: Timothy Yusuf

✉ [timmyyus@gmail.com](mailto:timmyyus@gmail.com)

Department of Agricultural Education, Federal University of Education, Zaria, Kaduna, Nigeria.

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preparation for employment as a valid goal of secondary education, bearing in mind that majority of the youths in Nigeria may not continue their formal education beyond secondary school.

These gives rise to the question that addresses the future of production skills acquisition (Carson, 2018). At what level should the majority of the youths in Nigeria not continue beyond secondary school? It is necessary to enforce the prevocational and vocational training for production skills acquisition at both the junior and secondary levels so that the youths may acquire at least the job-entry experience before graduation. According to Ekong (2020) Agricultural teachers are trained and groomed for quality impact of agricultural skills, knowledge, attitude and values for self-reliance, while students acquired basic knowledge and practical skills in agriculture which exposes them for occupation.

Lonsdale (2021) see teaching as a systematic rational and an organized process of transmitting knowledge, skills among others. In accordance with the principles of teaching, Obanya (2017) recommended teaching and learning that resolve around the principle of transformational pedagogy. Teaching of agricultural science of secondary school requires a sound and background in theory and practical by the teachers of agriculture. Maxwell, (2018) found strong relationship between teachers' know-how and students' achievement. He further found that library materials and science equipment enhance the performance of students.

## STATEMENT OF THE PROBLEMS

The importance of agricultural science in the growth and development of any nation cannot be over emphasized and it is apparent that the agricultural science cannot thrive without using appropriate instructional teaching strategies to the students. This is because future development of any nation in the fields of agricultural science depend on how well agricultural science subject is taught.

The major problem of teaching the agricultural science at basic and secondary

schools has been unable to transform the citizens and nation adequately.

The inability to manifest agricultural science practical skills and induction of interest in choosing agriculture as a career appears to be due to inadequate learning of teacher and learning process on the part of agricultural science teachers in Nigerian secondary schools. According to Moel (2022) the problem of beginning teaching includes class management and students' discipline, balancing work and personal life, managing stress, lack of preparation time at the beginning of school year, time management and motivating students. Longman (2018) noted that teaching and learning activities of agricultural science is grossly insufficient to elicit the desired level of initiative and creativity in students

## Objectives of the Study

The general purpose of this study is to determine the impediments affecting agricultural science in secondary schools in Lafia local Government area of Nasarawa state. The specific propose of the study will determine:

1. to determine the present impediments to teaching/learning of agricultural science in secondary schools
2. to determine the facilities available for the teaching/learning of agricultural science in secondary school.
3. to determine the strategies for improving student's performance in agricultural science in secondary school.

## Research Questions

The study is guide by the following questions:

1. What are the present impediments to teaching/learning of agricultural science in secondary school?
2. What are the facilities available for teaching/learning of agricultural science in secondary schools?
3. What are the strategies that will improve the students' performance in

agricultural science in secondary school?

## Methodology

### Design of Study

The study adopted descriptive survey research design which specified the nature of given phenomena. It gives a picture of a situation or a population. This is considered suitable because the study intends seeks the views of some teachers and school head with view to determine the strategies of improving the students' academic performance in agricultural science in ten selected schools in Lafia, Nasarawa state.

### Population

The population of this study comprised of 20 principals for all the school selected, 80 teachers for all the school selected.

### Instrument for Data Collection

The data gathering instrument was structured questionnaire developed by the researcher using data gathering through the review of related literature. Letter A, B, C and D. selections of A, was on the personal data, section B was on the impediments to teaching and learning of agricultural science in secondary schools, Section C, deals with the facilities available for teaching of agricultural science in

secondary schools. Section D focuses on the strategies that will improve the academic performance of student in agricultural science. A five point liker scale of strongly agree (SD), agree (A), disagree (D) and strongly Disagree (SD) was used for rating the questionnaire respectively.

### Procedure for Data Collection

The researcher visited the institutions and administered the questionnaire with one of the staff from the school. Based on the minute number of the respondents for sampling, 20 principles (school head) and 80 teachers.

### Data Analysis

The responses from various categories of respondents were subjected to the means of statistic, in order to determine the acceptance (agree), (disagree) level of each item on the questionnaire a decision rule on limit of number was follows. The calculated mean of 2.0 and above was considered agreed; while any mean below 2.0 was considered disagree.

## RESULTS

### Research Question

what are the present impediments to teaching and learning of agricultural science in secondary school?

**Table 1:** The Impediments to Teaching and Learning of Agricultural Science

Factors Respond Option		Principals			Teachers			General		
S/N	ITEMS	X	SD	Remark	x	SD	Remark	X	SD	Remark
1	There is no proper use of young farmers club	2.20	4.34	Agreed	2.19	21.71	Agreed	2.18	27.38	Agreed
2	There is no available competence teachers teaching agriculture	2.60	2.96	Agreed	1.48	27.09	Disagreed	1.70	30.09	Disagreed
3	There is insufficient time allocated to the	1.40	6.32	Disagreed	2.73	20.30	Agreed	2.46	24.68	Agreed

Corresponding author: Timothy Yusuf

[timmyyus@gmail.com](mailto:timmyyus@gmail.com)

Department of Agricultural Education, Federal University of Education, Zaria, Kaduna, Nigeria.

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Factors Respond Option		Principals			Teachers			General		
S/N	ITEMS	X	SD	Remark	x	SD	Remark	X	SD	Remark
4	subject in time table Proprietor do not provide enough fund for agricultural practical	3.30	4.46	Agreed	3.18	21.93	Agreed	2.20	28.29	Agreed
5	There is no enough time to complete the practical/theory aspect in the syllabus	1.95	5.27	Disagreed	3.03	22.76	Agreed	2.81	25.67	Agreed
6	Non-cooperative attitude of head of school through allocation of funding to the subject	2.60	2.96	Agreed	2.93	27.15	Agreed	2.86	31.78	Agreed
7	There is no proper supervision and inspection	3.00	3.78	Agreed	3.05	21.38	Agreed	2.04	27.26	Agreed
8	Lack of practical aspect of agricultural science	1.85	5.14	Disagreed	2.98	21.35	Agreed	2.06	25.34	Agreed

**Principals View:** The result analyzed in the above table (1) shows that the items 3, 8 and 5 principals disagree, and agreed to the other items with the present impediment to teaching and learning of agricultural science in secondary school.

**Teachers View:** Regarding to the teachers' responses they disagreed with items 2 and 9 on the table (1) above while they agreed on the rest of the items presented to them.

**General View:** And the general populace disagreed with item 2, and agreed with other items with the present impediments to teaching and learning of agricultural science in secondary school on the above table.

#### Research Question 2

What are the facilities available for teaching agricultural science

**Table 2:** Facilities Available for Teaching Agricultural Science

Factor Respond Option		Principals			Teachers			General		
Sn	ITEMS	x	SD	Remark	X	SD	Remark	X	SD	Remark
1	There is no adequate storage facilities, laboratory and	2.20	3.29	Agreed	2.13	21.10	Agreed	2.14	25.53	Agreed

Corresponding author: Timothy Yusuf

✉ [timmyyus@gmail.com](mailto:timmyyus@gmail.com)

Department of Agricultural Education, Federal University of Education, Zaria, Kaduna, Nigeria.

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Sn	Factor Respond Option ITEMS	Principals			Teachers			General		
		x	SD	Remark	X	SD	Remark	X	SD	Remark
2	other facilities necessary for teaching agricultural science There is available equipment's for teachers and student uses.	1.40	6.48	Disagreed	12.73	23.23	Disagreed	1.66	30.23	Disagreed
3	There is available fund allocated for repair and replacement of equipment	1.60	5.53	Disagreed	1.95	22.58	Disagreed	1.88	28.03	Disagreed
4	Teacher present enough teaching aids during the teaching of agriculture.	2.50	3.91	Agreed	2.68	22.04	Agreed	2.70	27.75	Agreed

The result of the data analyzed in table two above shows that the principal, teachers, and the general populace agreed with item 1 and 4 while they all disagreed with item 2 and 3 with the facilities available for teaching agricultural science.

### Research Question 3

What are the strategies that will improve students' academic performance in agricultural science in secondary schools?

**Table 3:** Strategies that will Improve Students' Academic Performance in Agricultural Science

S/n	Factor Respond Option ITEMS	Principals			Teachers			General		
		x	SD	Remark	x	SD	Remark	X	SD	Remark
1	Government should employ competent teachers	1.45	6.79	Disagreed	3.73	29.84	Agreed	3.27	31.52	Agreed
2	Teachers training programme should be organize not only by the government but also the school head	3.60	5.56	Agreed	3.55	26.36	Agreed	3.56	33.52	Agreed
3	Government should include teachers in	1.70	27.89	Disagreed	3.45	12.12	Agreed	3.1	25.86	Agreed

Corresponding author: Timothy Yusuf

✉ [timmyyus@gmail.com](mailto:timmyyus@gmail.com)

Department of Agricultural Education, Federal University of Education, Zaria, Kaduna, Nigeria.

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S/n	Factor Respond Option ITEMS	Principals			Teachers			General		
		x	SD	Remark	x	SD	Remark	X	SD	Remark
4	curriculum planning and development Adequate farm land should be allocated for practical purpose	3.30	4.46	Agreed	1.38	28.86	Disagreed	1.78	29.67	Disagreed
5	Adequate funding should be allocated to agriculture by the government/school head for various practical in the field	3.60	6.55	Agreed	3.53	26.36	Agreed	3.56	34.19	Agreed
6	Practical's period should be allocated in the time table and effective organization of young farmers club should be adhere to by teachers, school head and students	1.60	5.79	Disagreed	3.48	25.07	Agreed	3.1	27.45	Agreed

The result of the data analyzed on the above table 3 shows that the principals disagreed with item 1, 3 and 6 while agreed on the other items with the strategies that will improve students' academic performance in agricultural science in secondary schools. Teachers on the one hand responses shows that on item 4 and 9 disagreed while they agreed on the other items in response to the questionnaire given to them. The general public disagreed on the item 4 and 9 and then agreed with the rest of the items.

### DISCUSSION OF THE FINDINGS

Based on the research questions, the results obtained from the data collected was analyzed base on the response received as follows:

### The present impediment to teaching and learning of agricultural science in secondary school

It was disagreed by the principals that there is insufficient time allocated to the subject in the time table with SD 6.32, there is no enough time to complete the practical and theoretical aspect in the syllabus with SD (5.27), and also disagreed that there is lack of practical aspect of agricultural science with SD (5.14). While agreed they that there is no proper use of young farmers club with SD (4.34) there is available competent teachers teaching agricultural science with SD (2.96), proprietor do not provide enough funds for agricultural practical with SD (4.46), non-cooperative attitude of head of school through allocation of funding for the subject with SD (2.96),

Corresponding author: Timothy Yusuf

✉ [timmyyusuf@gmail.com](mailto:timmyyusuf@gmail.com)

Department of Agricultural Education, Federal University of Education, Zaria, Kaduna, Nigeria.

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there is no proper supervision and inspection with SD (3.78) and also agreed that there is insufficient land allocated for practical purpose with SD (5.74). It was disagreed by the teachers that there is available competence teachers teaching agriculture with SD (27.09), there is insufficient land allocated for practical purpose with SD (22.18). And they agreed that there is no proper use of young farmers club with SD (21.71), there is insufficient time allocated to the subject in time table with SD (20.30), proprietor do not provide enough fund for agricultural practical with SD (21.93), there is no enough time to complete the practical and theory aspect in the syllabus with SD (22.76), there is non-cooperative attitude of head of school through allocation of funding to the subject with SD (27.15), there is no proper supervision and inspection with SD (21.38), and that there is lack of practical aspect of agricultural science with SD (21.35). These agreed with (Nwankwo *et al.* 2015, Ngbongha *et al.* 2020)

In regard to the general populace it was agreed that there is no proper use of young farmers club with SD (27.38), there is insufficient time allocated to the subject in time table with SD (24.68), proprietor do not provide enough funds for agricultural practical with SD (28.29), there is no enough time to complete the practical and theory aspect in the syllabus with SD (25.67), there is non-cooperative attitude of head of school through allocation of funding to the subject with SD (31.78), there is no proper supervision and inspection with SD (27.26), there is lack of practical aspect of agricultural science with SD (25.34), and that there is in sufficient land allocated for practical purpose with SD (24.70). While on the other hand disagreed that there are available competence teachers teaching agricultural science with SD (30.09). (Amadi, *et al.* 2019, Judith 2020 and Joshua, 2024)

#### **The facilities available for teaching agricultural science**

It was agreed by both the principals, teachers and the general populace that there is no adequate storage facilities, laboratory and other facilities necessary for teaching agricultural sciences, with SD (3.29, 21.10 and 25.53

respectively) and that teachers present enough teaching aids during the teaching of agriculture with SD (3.91, 22.04 and 27.75 respectively). Both principals, teachers and the general populace disagreed that there is available equipment's such as tractor for teachers and students use with SD (6.48, 23.23, and 30.23 respectively) and also disagreed that there is available fund allocated for repair and replacement of equipment with SD (5.53, 22.58 and 28.03 respectively). These is in agreement with the reports of the following (Amadi, *et al.* 2019, fredricks, 2022 and Joshua, 2024)

#### **The strategies that will improve student's academic performance in agricultural science in secondary schools**

It was disagreed by the principals that Government employ competent teachers with SD (6.79) while both the teachers and general populace agreed with the fact that Government should employ competent teachers with SD (29.84 and 31.52 respectively). Both principals, teachers and the general populace agreed that teachers training program should be organized not only by the Government but also the school head with SD (5.56, 26.36 and 33.52 respectively).

It was disagreed by the principals that Government should include teachers in curriculum planning and development with SD (27.89) while both the teachers and the general and the general populace agreed that Government should include teachers in curriculum planning and development with SD (12.12 and 25.86 respectively). Principals agreed that adequate farm land should be allocated for practical purpose with SD (4.46) While both the teachers and general populace disagreed with the fact that adequate farm land should be allocated for practical purpose with SD (28.86 and 29.67 respectively).

It was agreed by both the principals, teachers and general populace that adequate finding's should be allocated to agriculture by Government and school heads for various practical in the field of agriculture with SD (6.55, 26.36 and 34.19 respectively), it was disagreed by the principal that practical period should be allocated in the time table and effective



organization of young farmers club should be adhere to by school head, teachers down to students with SD (5.79), while it was agreed by the teachers and the general populace with SD (25.07 and 27.45 respectively). It was agreed by both the principal's teachers and general populace that teacher should use dynamic methods of teaching in teaching agricultural science with SD (5.22, 25.06 and 31.99 respectively), and that teacher should also improvise whenever the need arise for effective teaching of the subject with SD (5.22, 24.62 and 31.64 respectively). These agreed with; Lonslide, 2021 and Moel, 2022. It was agreed by the principal that adequate supervision should be carried out by the Government and school authority to check and correct any error in the system with SD (4.85) while the teachers and the general populace disagreed that adequate supervision should be carried out by the Government and school authority to check and correct any error in the system with SD (30.54 and 34.02 respectively). These collaborated with the reports presented by; (Carson 2028, Maxwell 2018, Longman 2018, Adeyemo, 2020, and Raphael 2020)

## CONCLUSION

The desire to produce competent graduate of agricultural science in secondary schools can be achieved when the facilities in the schools are relevant and adequate for the program demanded by the curriculum. This study has shown that the agricultural facilities in secondary school are inadequate and the identified relevant strategies toward acquiring adequate facilities in secondary schools are determined. Hence, the call for immediate implementation of these strategies in order to meet the goals of vocational and technical education as usually identified in the National Policy on Education of our great Nation Nigeria.

## RECOMMENDATIONS

1. The present impediments to proper teaching and learning of agricultural science affects the improvement of skill acquisition, therefore there is need for Government to employed well equipped

competent teachers of agricultural science to teach the subject.

2. There is need for the Government to include Agricultural teachers in curriculum planning and developments since the teacher are the curriculum implementers.
3. Incentive such as hazard allowance, science-oriented teachers allowance should be introduced and properly maintained; this will motivate them to perform their duties effectively.
4. The school authority should not relay on the Government alone for training their teachers, mini-work shop should be organized in the school for training teacher in the area they have deficiency, because they know their problem better.
5. Non- Governmental Organization (NGOS), Parent Teachers Association (PTA), and Community Based Organization (CBOS) should be sought for support in supplying relevant facilities to Agricultural science laboratory and farm.
6. Government should provide adequate facilities to agricultural sector in the school using current strategies identified to ensure acquisition of relevance to skills, knowledge and experience that are relevant to the growth of the country.
7. Teachers should use different methods of teaching, teaching aids and improvise any valuable material that can attract the interest of the students in the subject, which can motivate them to improve in their academic performance in the subject, since student learn best when they are interested.

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Corresponding author: Timothy Yusuf

✉ [timmyyus@gmail.com](mailto:timmyyus@gmail.com)

Department of Agricultural Education, Federal University of Education, Zaria, Kaduna, Nigeria.

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