AVAILABILITY AND UTILIZATION OF INSTRUCTIONAL FACILITIES FOR TEACHING ANIMAL HUSBANDRY TRADE SUBJECT IN SECONDARY SCHOOLS IN DELTA STATE

Abstract

The research problem addressed in this study was on the accessibility and use of instructional facilities in teaching the Animal Husbandry trade subject in secondary schools in Delta State, Nigeria. The adopted research design was descriptive survey research. A total of 722 agricultural science teachers were chosen as the population, and 217 teachers who participated in multi-stage stratified random sampling made up the sample; 206 teachers responded to the questions validly. A structured questionnaire that was tested and had a reliability coefficient of 0.84 was used to gather the data. Data analysis was performed through mean and standard deviation with a cutoff mean of 2.50. The results showed that the majority of the required instructional facilities, such as the school farms, livestock pens, live animals, feeding equipment and veterinary kits, were mostly unavailable, whereas they had farm tools, charts and posters. Reimbursement of available facilities was mostly low, especially with practical classes that use live animals and school farms. The challenges found to be major were insufficient funds, the high cost of keeping live animals, the low maintenance culture, low teacher training, high class sizes, and poor electricity and water supply. The research came up with the conclusion that insufficient availability and poor use of teaching facilities are some of the factors that do not assist in teaching animal husbandry in a secondary school in Delta State. It suggested better facility provision, capacity building of teachers, proper funding and accommodating school management to improve acquisition of practical skills.

Keywords: Animal Husbandry, instructional facilities, availability, utilization, secondary schools, Delta State.

Introduction

Education is one of the most important mechanisms of national development particularly because it equips the students with the attitudes, practical skills and other relevant knowledge that they need to be economically productive and self-reliant. Vocational and technical education has received more attention in Nigeria as a means of lowering unemployment, encouraging entrepreneurship, and improving food security (Federal Republic of Nigeria [FRN], 2014). Since agriculture remains an important part of the Nigerian economy and an important source of income by a large percentage of the population, agricultural education takes a centre stage in the scenario (Iyeke, 2025).

The goal of the Animal Husbandry trade subject, which is under the senior secondary school curriculum is to introduce students to both theoretical and practical aspects of livestock

production, management, marketing, and health. Poultry production, piggery, raising sheep and goats, raising rabbits, housing systems, feeding, breeding, and disease control are all embedded in it (Nigerian Educational Research and Development Council [NERDC], 2012). The overall aim in selecting Animal Husbandry as a trade subject is to enable students to acquire employable skills, which can either translate to self-employment or further studies or participation in the agricultural industry.

However, the availability and utilization of instructional facilities are critical to the successful teaching and learning of Animal Husbandry. Instructional facilities in this context refers to physical and material resources used to facilitate the teaching and learning processes. Adeyemi (2024) listed school farms, livestock units, farm buildings, tools, feed materials, veterinary supplies, charts, models, audiovisual aids, and other pertinent educational resources as some of the instructional resources that can be used in teaching Animal husbandry. Instructional facilities are essential in vocational and trade subjects like Animal Husbandry because the curriculum places more emphasis on hands-on learning than abstract theoretical instruction.

According to educational scholars, such as Salau (2023), Iyeke and Ikeoji (2019), Ikeoji (2017), meaningful learning happens when students are actively involved in practical activities using the appropriate facilities. Students can observe, practice, and learn critical skills in Animal Husbandry thanks when live animals, functional pens, feeding troughs, waterers, and health management equipment are available. On the other hand, inadequate or non-existent facilities frequently lead to poor skill acquisition, ineffective teaching, and low student interest in the subject.

Regardless of the acknowledged significance of instructional facilities, most of the secondary schools in Nigeria still face severe problems regarding the supply and proper use of such facilities. Research done in various states, such as that of Job and Edet (2023); Agbidi, *et al.* (2022); Iyeke, *et al.* (2021) has revealed a prevalent lack of agricultural instructional facilities, including those needed to teach Animal Husbandry. Animal husbandry is also being taught in most schools through verbal explanations and use of textbooks where students are not given a chance to work in the practical field. This is contrary to what trade subjects are supposed to accomplish, which is competency-based learning and acquiring practical skills.

The case is of particular concern in Delta State. Delta State has good ecological features to produce livestock, and also has various secondary schools that provide agricultural trade subjects, such as Animal Husbandry to students. However, available empirical evidence, such as that of Obue and Egbule (2016); Oladayo and Dimoni (2025) has indicated that most of these schools do not have operational school farms, livestock units, and rudimentary Animal Husbandry equipment. Where these facilities exist, they tend to be inadequate in number, old-fashioned, dilapidated or inaccessible to be as instructional resources on routine basis. This situation poses a big challenge to teachers who might not have the required resources to enable them to effectively implement the Animal Husbandry curriculum.

In addition to the availability, utilization to instructional facilities is another key component of teaching efficacy. Utilization describes how much the facilities available are used or utilized by teachers and students in the process of teaching and learning. Ugwaka (2025) stated that in cases where facilities are present, they are not fully used because of the lack of teacher competence, the absence of training, overcrowding in classrooms, lack of time, bad supervision, and insufficient funds to maintain them. In other instances, facilities are reserved to be used during inspection instead of being used in routine classroom activities; hence, students are limited to practical experiences.

Learning outcomes of students are severely affected by the fact that there is lack of availability and utilization of instructional facilities to teach Animal Husbandry. Without being given a practical learning experience, such students will have a lesser chance to become

interested in livestock production or learn how to be self-employed upon graduation (Uduigwome, *et al.*, 2024). This contravenes the objectives of national vocational education, youth empowerment and agricultural development in the country. It is also a contributor to the bad attitudes towards agriculture as an unprofitable or unattractive career choice among secondary school students.

Furthermore, Animal Husbandry teachers encounter professional challenges due to inadequate instructional facilities. They might not be able to illustrate practical concepts, evaluate the competencies of the students, or apply learner-focused teaching methods. This can result to frustration among the teachers, the use of theoretical teaching practice, and low-quality instruction (Abubakar, 2023). This in turn can have a negative impact on performance of the students in their internal and external examination. It is against this background that this study aims at investigating the availability and utilization of instructional facilities for teaching animal husbandry trade subject in secondary schools in Delta State.

Statement of the Problem

The availability and utilization of Instructional materials are critical to the successful teaching of Animal Husbandry trade subject. However, many secondary schools in Delta State lack adequate and functional facilities, and the ones that do exist are frequently underutilized. This leads to primarily theoretical instruction, which restricts students' ability to acquire practical skills and undermines the goals of the Animal Husbandry trade subject.

Purpose of the Study

The general purpose of the study was to examine the availability and utilization of instructional facilities for teaching animal husbandry trade subject in secondary schools in Delta State. Specific objectives were to:

i. determine the instructional facilities available for teaching Animal Husbandry trade subjects in secondary schools in Delta State;
ii. find out the extent to which the available instructional facilities are utilized in teaching Animal Husbandry in secondary schools; and
iii. identify the challenges affecting the availability and utilization of instructional facilities for teaching Animal Husbandry in secondary schools in Delta State.

Research Questions

1. What instructional facilities are available for teaching animal husbandry trade subject in secondary schools in Delta State?
2. To what extent are the available instructional facilities utilized in teaching animal husbandry trade subject in secondary schools in Delta State?
3. What are the challenges affecting the availability and utilization of instructional facilities for teaching animal husbandry trade subject in secondary schools in Delta State?

Methodology

The study adopted a descriptive survey research design. The population of the study comprised 722 Agricultural Science teachers teaching Animal Husbandry trade subject in public secondary schools in Delta State (Post Primary Education Board, PPEB, 2025). The sample size for the study was 217 Agricultural Science teachers, representing approximately 30% of the population. The respondents were selected through a multi-stage stratified random sampling technique from the three senatorial districts of Delta State (Delta North, Delta Central, and Delta South).

A structured questionnaire titled “Questionnaire on Availability and Utilization of Instructional Facilities for Teaching Animal Husbandry Trade Subject in Secondary Schools

in Delta State" was used for data collection. The questionnaire was structured into four sections and comprised 41 items covering availability, utilization, and challenges affecting instructional facilities. The instrument was designed on a four-point rating scale: *Available and Adequate (4), Available but Inadequate (3), Available but Not Functional (2), Not Available (1)* for availability; *Very High Extent (4), High Extent (3), Low Extent (2), Very Low Extent (1)* for utilization; and *Strongly Agree (4), Agree (3), Disagree (2), Strongly Disagree (1)* for challenges. The instrument was face validated by three lecturers from the Department of Vocational Education (Agricultural Education Unit) and one lecturer from Measurement and Evaluation, Department of Guidance and Counselling, Delta State University, Abraka. The reliability of the instrument was determined using the Cronbach Alpha method, which yielded a reliability coefficient of 0.84, indicating that the instrument was reliable.

The instrument was administered to Agricultural Science teachers with the assistance of three (3) trained research assistants. Out of the 217 copies of the questionnaire administered, 206 copies were correctly completed and retrieved, representing a high return rate. Data collected were collated and inputted into SPSS Version 23 and analyzed using Mean ($\bar{x}$) and Standard Deviation (SD). A cut-off mean of 2.50 was used as the benchmark for decision-making. Any item with a mean score of 2.50 and above was accepted, while items with mean scores below 2.50 were rejected.

Results

The results were presented below:

Research Question 1

What instructional facilities are available for teaching animal husbandry trade subject in secondary schools in Delta State?

Table 1

Mean ($\bar{x}$) and Standard Deviation Values of the Instructional Resources Available for Teaching Animal Husbandry Trade Subject (n=206)

S/N	Instructional Facilities	Mean ($\bar{x}$)	SD	Decision
1	School farm for animal husbandry	2.08	0.71	Not Available
2	Poultry house	2.21	0.69	Not Available
3	Goat/sheep pen	1.94	0.73	Not Available
4	Pig pen	1.68	0.77	Not Available
5	Rabbit hutch	1.55	0.79	Not Available
6	Live animals for practical lessons	1.72	0.75	Not Available
7	Feeding troughs	2.14	0.68	Not Available
8	Drinkers	2.19	0.66	Not Available
9	Animal feeds	2.06	0.72	Not Available
10	Storage facilities	1.98	0.70	Not Available
11	Veterinary kits	1.84	0.76	Not Available
12	Farm tools, such as shovel, rake, wheelbarrow, and so on	2.63	0.58	Available
13	Weighing scales for animals	1.61	0.80	Not Available
14	Incubators	1.49	0.82	Not Available
15	Brooders	1.57	0.78	Not Available
16	Instructional charts	2.81	0.49	Available
17	Posters	2.74	0.52	Available

18	Models	2.05	0.69	Not Available
19	Specimens	2.12	0.67	Not Available
20	Audio-visual teaching aids	1.93	0.74	Not Available
21	Water supply for livestock	2.01	0.71	Not Available
22	Waste disposal facilities	1.88	0.76	Not Available

Source: Field Work (2025)

The data presented in Table 1 show the mean and standard deviation values of instructional facilities available for teaching Animal Husbandry trade subject in secondary schools in Delta State. The findings indicate that most instructional facilities required for effective teaching of animal husbandry are largely not available in the schools. Facilities such as school farms for animal husbandry (mean = 2.08, SD = 0.71), poultry houses (mean = 2.21, SD = 0.69), goat/sheep pens (mean = 1.94, SD = 0.73), pig pens (mean = 1.68, SD = 0.77), rabbit hutches (mean = 1.55, SD = 0.79), and live animals for practical lessons (mean = 1.72, SD = 0.75) were rated below the cut-off mean of 2.50, indicating that they are not available in most schools.

Similarly, essential supporting facilities such as feeding troughs, drinkers, animal feeds, storage facilities, veterinary kits, weighing scales, incubators, brooders, models, specimens, audio-visual teaching aids, water supply for livestock, and waste disposal facilities were also rated as not available. However, a few instructional resources, including farm tools such as shovel, rake, and wheelbarrow (mean = 2.63, SD = 0.58), instructional charts (mean = 2.81, SD = 0.49), and posters (mean = 2.74, SD = 0.52), were rated above the cut-off mean, indicating that they are available in most schools.

Research Question 2

To what extent are the available instructional facilities utilized in teaching animal husbandry trade subject in secondary schools in Delta State?

Table 2

Mean ($\bar{x}$) and Standard Deviation Values of the Extent to Which the Available Instructional Facilities are Utilized Teaching Animal Husbandry Trade Subject (n=206)

S/N	Utilization Statements	Mean ($\bar{x}$)	SD	Decision
1	School farm is used regularly for animal husbandry lessons	2.06	0.68	Low Extent
2	Live animals are used during practical teaching	1.79	0.74	Low Extent
3	Students participate actively in animal management practices	2.11	0.66	Low Extent
4	Farm tools are used for demonstrations	2.62	0.59	High Extent
5	Instructional charts and models are used during lessons	2.83	0.51	High Extent
6	Practical lessons are conducted as prescribed by the curriculum	2.04	0.69	Low Extent
7	Audio-visual aids are used to complement teaching	1.91	0.73	Low Extent
8	Facilities are accessible to students during practical periods	2.22	0.65	Low Extent
9	Teachers regularly supervise practical activities	2.71	0.56	High Extent
10	Facilities are used for continuous assessment	2.08	0.67	Low Extent
11	Students are encouraged to handle animals under supervision	1.96	0.72	Low Extent
12	Practical records are kept after lessons	2.48	0.63	Low Extent

Source: Field Work (2025)

The data in Table 2 present the mean and standard deviation values of the extent to which available instructional facilities are utilized in teaching Animal Husbandry trade subject in secondary schools in Delta State. The results show that the utilization of instructional facilities is generally low. The use of school farms for animal husbandry lessons (mean = 2.06, SD = 0.68), live animals during practical teaching (mean = 1.79, SD = 0.74), students' participation in animal management practices (mean = 2.11, SD = 0.66), and conduct of practical lessons as prescribed by the curriculum (mean = 2.04, SD = 0.69) were all rated to a low extent.

Additionally, audio-visual aids, accessibility of facilities during practical periods, use of facilities for continuous assessment, encouragement of students to handle animals, and keeping of practical records were also rated to a low extent. However, the use of farm tools for demonstrations (mean = 2.62, SD = 0.59), instructional charts and models during lessons (mean = 2.83, SD = 0.51), and regular supervision of practical activities by teachers (mean = 2.71, SD = 0.56) were rated to a high extent.

Research Question 3

What are the challenges affecting the availability and utilization of instructional facilities for teaching animal husbandry trade subject in secondary schools in Delta State?

Table 3

Mean ($\bar{x}$) and Standard Deviation Values of the Challenges Affecting the Availability and Utilization of Instructional Facilities for Teaching Animal Husbandry Trade Subject (n=206)

S/N	Challenges	Mean ($\bar{x}$)	SD	Decision
1	Inadequate funding limits provision of facilities	3.42	0.39	Agreed
2	High cost of maintaining live animals	3.31	0.43	Agreed
3	Poor maintenance culture affects facility usage	3.18	0.48	Agreed
4	Lack of teacher training affects utilization	3.06	0.52	Agreed
5	Large class size hinders effective practical lessons	3.24	0.45	Agreed
6	Insufficient time allocated for practicals	3.29	0.44	Agreed
7	Fear of damage or loss of facilities limits use	3.01	0.54	Agreed
8	Poor electricity and water supply affect utilization	3.36	0.41	Agreed
9	Lack of support from school management	3.11	0.50	Agreed
10	Absence of supervision by education authorities	3.07	0.52	Agreed
11	Security challenges affect keeping of animals	3.22	0.46	Agreed
12	Negative student attitude towards animal husbandry	2.94	0.57	Agreed

Source: Field Work (2025)

The data presented in Table 3 reveal the mean and standard deviation values of the challenges affecting the availability and utilization of instructional facilities for teaching Animal Husbandry trade subject in secondary schools in Delta State. The results show that respondents agreed with all the listed challenges as major constraints. Inadequate funding (mean = 3.42, SD = 0.39), high cost of maintaining live animals (mean = 3.31, SD = 0.43), poor maintenance culture (mean = 3.18, SD = 0.48), and lack of teacher training (mean = 3.06, SD = 0.52) were strongly identified as key challenges.

Other significant challenges include large class size, insufficient time allocated for practicals, fear of damage or loss of facilities, poor electricity and water supply, lack of support

from school management, absence of supervision by education authorities, security challenges, and negative student attitude toward animal husbandry.

Discussion of Findings

The findings in Table 1 reveal that most essential instructional facilities for teaching Animal Husbandry trade subject are largely unavailable in secondary schools in Delta State, with only farm tools, instructional charts, and posters being available. This is not surprising since other areas of the literature have indicated that a number of schools in Nigeria have inadequate school farms, livestock pens, and practical equipment restricting practical teaching on agriculture (Iyeke, *et al.*, 2021; Agbidi, *et al.,* 2022). It is also indicated that the absence of living animals and working facilities may indicate that the teaching process is more theoretical rather than practical, which may impede the acquisition of the practical skills that the students will require to become self-employed and work in livestock production (Salau, 2023). Another thing that Adeyemi (2024) points out is that the lack of effective teaching aids in vocational courses negativizes the competency-based aims of the course.

Table 2 shows that the utilization of instructional facilities is generally low, particularly regarding live animals, school farms, and practical lessons. Only farm tools, charts, and models were utilized to a high extent. The finding aligns with the reports that even in cases of the availability of some resources, they are either underused as a result of teacher constraints, big classes, or limited access (Ugwaka, 2025; Abubakar, 2023). It has been associated with poor teacher competence and overuse of theoretical methods that result in the low use of practical facilities, which have negative impacts on the interest and competence development of students in animal husbandry (Uduigwome, *et al.,* 2024). It means that the students of Delta State most probably do not have enough practical experience even though the curriculum is based on the practical learning.

Table 3 highlights systemic and infrastructural challenges, including inadequate funding, high cost of maintaining live animals, poor maintenance culture, insufficient teacher training, and poor electricity and water supply. Similar research studies in Nigeria also confirm these findings, stating that one of the key obstacles to successful agricultural education is economic limitations, lack of governmental support, and poor infrastructures (Obue & Egbule, 2016; Iyeke, *et al.,* 2021). Moreover, the problems of security and the large number of learners also hinder the practical teaching process, which proves the point that vocational and trade courses do not easily address the curriculum goals because of environmental and institutional barriers (Job and Edet, 2023).

Conclusion

The report comes to the conclusion that the teaching facilities of teaching Animal Husbandry in secondary schools in Delta State are in many ways insufficient, and their use is in most cases low. Use of basic materials like farm tools, charts, and posters are mostly applied in the absence of essential resources like live animals, pens and other practical equipment. Poor teaching is caused by various challenges like poor funding, poor service, poor teacher training and all this constrains the students to acquire practical skills and it affects the goals of vocational agricultural education.

Recommendations

The following recommendations were made:

1. Schools should provide functional animal husbandry facilities, including farms, pens, and live animals.
2. Teachers should receive regular training on the use of instructional facilities.
3. Adequate funding should be allocated for the purchase and maintenance of resources.

4. School management should create an enabling environment for practical lessons.

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