



# Community-Based Resource Availability and Animal Husbandry Course Implementation in Delta State, Nigeria: A Pedagogical Approach

Adaighofua, OBUE<sup>1\*</sup>, Canice, N., IKEOJI,<sup>2</sup> Lucky Odor, ILOBA<sup>3</sup>

<sup>1,3</sup>Ph.D. Scholar, Department of Agricultural Science Education,  
Delta State University, Abraka, Nigeria

<sup>2</sup> Professor, Department of Agricultural Science Education,  
Delta State University, Abraka, Nigeria

\*Corresponding Author's Email: [nshaghofua@yahoo.com](mailto:nshaghofua@yahoo.com)

## ABSTRACT

The study examined the effect of community-based resource availability on animal husbandry course implementation in Delta state, Nigeria. The questionnaires were administered with the help of 6 research assistants; who were able to retrieve 150 copies from principals, and 210 from Agricultural Science teachers. The Multi-staged stratified random sampling procedure was used to arrive as the sample size. The questionnaire was faced validated by 5 experts while the Split-half reliability method proved that the instrument is reliable. Data pertaining the research questions were analyzed with percentages (%), means ( $\bar{x}$ ), and standard deviations (SD), while the four (4) hypotheses postulated were tested using t-test at 0.05 significant level. The study found that, the mean ratings of male and female principals and Agricultural Science teachers on the extent to which (i) Animal Husbandry has been implemented (ii) Animal Husbandry is readily available in both rural and urban areas of Delta State secondary schools; and (iii) community-based resources needs for implementing the Animal Husbandry do not differ significantly. However, the mean ratings of principals and Agricultural Science teachers on the extent to which lack of community-based resources availability constitute an impediment to the implementation of Animal Husbandry in secondary schools in Delta State. Hence, the study concludes that, community-based resource availability is the major reason impeding full implementations of Animal Husbandry Courses in Delta State, Nigeria. As such, efforts should be made to ensure community resources, especially those owned by government should be made readily available to Agricultural Science teachers and students for use.

**Keywords:** Community-Based Resource Availability, Animal Husbandry, Course Implementation, Pedagogical Approach

## 1. INTRODUCTION

Globally, education is well-recognized as a powerful tool that brings about desirable changes in the behaviour of the recipients. Ohia and Osah (2018) stressed that, while education is considered as a tool for achieving desirable change, curriculum served as the instrument that is used for delivering educational goals and objectives. Alade (2011) added that, what describes the entire programmes which a school offers is its curriculum. Specifically, the curriculum helps spells out the course contents, teaching methods, learning objectives, learning resources, programme structure, assessment and evaluation. As such, the overall reason for curriculum planning is to attain certain level of change in behaviour.

It is in the light of the above that, the Nigerian educational curriculum has been reviewed severally in response to new trends in the labour market and changing societal needs. Thus, the Universal Basic Education (UBE) curriculum, also referred to as the 6-3-3-4 system of education, was introduced in Nigeria in 1999 to ensure unfettered access to quality and functional education (Yamma & Izom,

2018). The rationale of the UBE was to inculcate in the students, technical skills for the enhancement of technological growth of Nigeria. In 2011, Nigerian Educational Research and Development Council (NERDC) launched the new Senior Secondary Education Curriculum (SSEC). According to NERDC (2012), the SSEC is intended to meet national and global goals such as National Economic Empowerment and Development Strategy (NEEDS), Education For All (EFA) and Millennium Development Goals (MDGs), and to bridge the gaps in the content and delivery processes of the secondary school curriculum to ensure its relevance to societal needs.

The introduction of the SSEC is aimed at ensuring that graduates from secondary schools are professionally trained in entrepreneurship and technical skills, and also possess relevant Information Communication Technology (ICT) skill that will equip them for challenges in the labour market (NERDC, 2011). There are 34 trade subjects, and these are Auto Body Repair and Spraying Painting, Auto Electrical Work, Auto Mechanical Work, Furniture Making, Upholstery, Photography, Cosmetology, Garment Making, Fishery, Animal Husbandry, and so on (NERDC, 2012a). It is hoped that the SSEC will equip every Nigerian citizen to break the cycle of unemployment through the development of self as a precursor to a meaningful contribution to the development of the society of which he or she is part (Alabi, 2014).

The Animal Husbandry curriculum of the SSEC was designed to train students in practical animal agriculture (Udofia & Adebayo, 2010). According to Okereka and Princwill (2015), Animal Husbandry is an applied science and a vocational subject with emphasis on the acquisition of knowledge and skills associated with the rearing of animals in line with the approved curriculum to meet the key targets of the National Economic Empowerment and Development Strategy (NEEDS), and more to this. Oyeleye, Balogun, and Makun (2018) stated that the objectives of Animal Husbandry are to stimulate and sustain students' interest in practical Animal Husbandry, enable them acquire knowledge in Animal Husbandry, prepare them for further studies and occupation in Animal Husbandry, and also to train them on how to generate income on their own from the training and skills they have acquired. They further stated that training students in Animal Husbandry entails providing appropriate housing facilities, equipment and various structures for farm animals in the school environment for learning.

Furthermore, to ensure that, Animal Husbandry units are fully established in schools, certain measures must be put in place. Ayonmike, Okwelle, and Okeke (2015) stated that feeds, feeding regime plan, farm sanitation equipment for maintaining hygiene of animal and farm house, record keeping equipment, and animal health maintenance equipment are among the resources that need to be available for the implementation of the Animal Husbandry trade subject. The Nigerian Educational and Development Council (2009) specifically listed the eighteen (18) equipment and structures needed for the teaching of Animal husbandry to student. They are as follows: dehorning equipment, nose-punching equipment, ear-notching equipment, milking machines, emasculators, burdozzer pliers, incubators, hurricane lanterns, hover/electric brooders, sewing machines, egg Candler, brooder houses, drugs for disease control, feeds, drinkers, feeding troughs, docking equipment, and de-beaking equipment.

Orji (2014) reported that, instructional materials for teaching Animal Husbandry are the important resources needed for the transfer of Animal Husbandry information and skills to students. As such, there is need for adequate and appropriate resources for implementing the Animal Husbandry trade subject. However, one of the challenges which bedevils the Nigerian educational system is that of inadequate supply of facilities and equipment necessary for acquiring skills and competencies for self-employment. Changilwa and Akala (2017) however stressed that, lack of certain resources for implementing the Animal Husbandry trade subject should not be too much of a problem because resource inadequacies can be mitigated by signing equipment co-sharing agreements with peer institutions and local firms. Orji (2014) asserted that adequate and appropriate resources for implementing the Animal Husbandry trade subject can be secured from the school host community that has the interest and support for Animal Husbandry, and has the available local resources.

Ikeoji (2017) stressed that, for Animal Husbandry to be fully implemented, it must be implemented in such a way that it will engage learners in meaningful experiences by putting emphasis on learning by doing which is apparent in the attention given to laboratory work, field trips, problem-solving and supervised occupational experience programmes. Also, Prosser (1940) emphasized the need for

learners to be trained on the actual job environment using the experiences of masters of that occupation. In essence, Animal Husbandry students should be given the opportunity to gain first-hand experience in the actual jobs using the required community resources.

Based on the above assertions, the major thrust of this work lies on the inability of extant empirical documentation to examine the community resources needs for implementing the Animal Husbandry trade subject in Delta State. Similarly, most extant empirical studies could not document the influence of demographic factors like sex and location on the availability of community resources in teaching Animal Husbandry trade subject in Delta State, Nigeria. Hence, this paper centers on finding the extent of availability and needs of community resources in secondary schools in Delta State. In a bid to achieve this core objective, four (4) research questions were raised which are:

1. To what extent has animal husbandry been implemented as a trade subject in Delta State secondary schools?
2. To what extent are community-based resources available for implementing the Animal Husbandry trade subject in Delta State?
3. To what extent does lack of community-based resources availability constitute an impediment to the implementation of animal husbandry in secondary schools in Delta State?
4. What are the community-based resources needs for implementing the animal husbandry trade subject in Delta State?

## 2. LITERATURE REVIEW

One of the critical factors which affect animal husbandry curriculum implementation has been on the need to have competent teachers with adequate deployment of teaching methods with a view to promote learning. Justifiably, Olokundun, Hezekiah, Stephen, and Fred (2014), reported that entrepreneurship programme in Nigeria covers the required content, but the method of teaching was not practical oriented and was devoid of real life situations, which makes it ineffective. Again, Ajibola (2008) found out that most of the teachers are not qualified to teach the subject introduced in the curriculum, and the Agricultural Science teachers are not exempted, because they were not trained to teach Animal Husbandry; and Amugo (2007) evidenced that, available specialist teacher only use theory methods in their classroom work without the practical aspect. Hence, the study hypothesizes that:

**Ho<sub>1</sub>:** There was no significant difference between the mean ratings of principals and Agricultural Science teachers on the extent to which Animal Husbandry has been implemented in Delta State secondary schools.

Additionally, to ensure that, animal Husbandry as a trade subject is fully implemented; there are certain items that needed to be available. These items include: resource personnel, goat farms, piggery, snailery, poultry farms, animal feeds, refrigerators and vaccines. The findings are in line with Daudu (2012) whom reported that, human resources are quite adequate, material resources are not very current, and essential equipment were not available for use. Alabi (2014) opined that the trade curriculum will become more relevant to the students and the society when instructional materials are readily available. Maduewesi (2010) reported that adequate availability of equipment and facilities and their proper utilization have been positively correlated to good performance in examinations, while poor performance has been blamed on inadequacies.

However, Uduigwome and Ikeoji's (2020) findings that revealed that most secondary schools in Edo State do not have adequate material resources for effective implementation of the Animal Husbandry trade subject. To overcome the challenge of unemployment, Charles Prosser's Theorems clearly stated that the only way the challenge of unemployment can be overcome is to engage students in the use of community resources when they are still in school, so that at the point of graduation, they must have acquired lots of skills that will enable them fit into the market demand of the community where they reside, and also make a living for themselves. Hence, we hypothesize that:

**Ho<sub>2</sub>:** There was no significant difference between the mean ratings of Agricultural Science teachers in rural and urban areas on the extent to which community-based resources are available for implementing Animal Husbandry.

In the light of the above, there other factors that may affect the extent to which lack of community-based resources constitute impediment to the implementation of Animal Husbandry in secondary

schools. They included that the objectives of the Animal Husbandry trade subject will not be achieved, learning becomes more theoretical than experience-based, poor retention capacity of students, ineffectiveness of the school system, among others. To further buttress this, Bukoye (2019), and Ali, et al. (2020) found that, non-availability and inadequacy of instructional materials are the major causes of ineffectiveness of the school system and poor performance of students in schools. Also, Atubi (2021) observed that lack of learning materials affects teaching and learning. Thus, lack of community-based resources for teaching Animal Husbandry in secondary schools in Delta State will lead to ineffective learning, poor retention capacity of students and lack of skills and competencies in performing the various skills involved in Animal Husbandry.

**Ho<sub>3</sub>:** There was a significant difference between the mean ratings of principals and Agricultural Science teachers on the extent to which lack of community-based resources availability constitute an impediment to the implementation of Animal Husbandry in secondary schools in Delta State.

Worthy to note is that, various community resources by Agricultural Science teachers for implementing Animal Husbandry include resource personnel, poultry farms, piggery, goat farms, grass-cutter farms, rabbit farms, various types of animal feeds, sheep farms, cattle farms, castrators, candlers, among others. NERDC (2012) emphasized that, for all schools offering Animal Husbandry as a trade subject. Also, WAEC (2021) and National Examination Council (2014) noted that, schools must make farms where crops are grown, with at least one species of non-ruminant including rabbit, pig and poultry, and one ruminant such as goat, sheep and cattle, and where feasible, a fish farm.

According to Campitelli and Gobet (2011), these resources are very important in teaching because it aids learning, as well as retention and recalling. Perkins (2009), Rush, et al. (2010), Nwike and Onyejebu (2013), Ikehi, et al. (2014) opined that it makes the content of the lesson understandable to learners. Furthermore, Fakomogbon (2012), Igu, et al. (2014), and Adebule and Ayoola (2016) reported that students taught with instructional resources performed better than those taught without instructional resources, thus, the reason why they are needed in implementing the Animal Husbandry trade subject. These assertions may however not be true in all respect; hence, we hypothesize:

**Ho<sub>1</sub>:** There was no significant difference between the mean ratings of male and female Agricultural Science teachers on the community-based resources needs for implementing the Animal Husbandry trade subject in Delta State.

### **3. MATERIAL AND METHODS**

The survey research method is used in gathering demographic data of the respondents (principals and Agricultural Science teachers) through the aid of the questionnaire. Accordingly, the population size is one thousand, six hundred and nine (1,609), comprising of four hundred and sixty-five (465) principals, and one thousand, one hundred and forty-four (1,144) Agricultural Science teachers in public secondary schools in Delta State (Post Primary Education Board, PPEB, 2020). However, 500 respondents (i.e. 290 Agricultural Science teachers representing 25.4% of the population of Agricultural Science teachers and 210 principals representing 45% principals in secondary schools in Delta State) were sampled using both the Krejcie and Morgan (1970) and the multistage sampling procedure. Specifically, the Multi-staged sampling procedure for the study is shown in Table 1.

**Table 1. Multi-Staged Stratified Random Sampling Procedure for the Study**

<b>Senatorial District</b>	<b>LGAs</b>	<b>Teachers Population</b>	<b>Principals Population</b>	<b>LGAs Sampled</b>	<b>Teachers Sampled</b>	<b>Principals Sampled</b>
Delta North	9	489	166	5	124	75
Delta Central	8	465	183	4	118	83
Delta South	8	190	116	4	48	52
<b>Sub-total</b>	<b>25</b>	<b>1144</b>	<b>465</b>	<b>13</b>	<b>290</b>	<b>210</b>

**Source: Field Survey (2021)**

For ease of description, the research items were rated at 4-point rating scale of Strongly Agreed (SA), Agreed (A), Disagreed (D), and Strongly Disagreed (SD), with their nominal values as 4, 3, 2 and 1, respectively with a benchmark value of 2.50. In this case, any item with mean ( $\bar{x}$ ) score of 2.50 to 4.00 was regarded as Implemented while those below 2.50 was regarded as Not Implemented/Disagreed. For Section B, any item with mean ( $\bar{x}$ ) value from 0.00-0.99 was regarded as not available. Those items with mean ( $\bar{x}$ ) value from 1.00-1.99 was regarded as available but not adequate, while those with mean ( $\bar{x}$ ) values of 2.00 and above was regarded as available and adequate. Hypotheses were tested with t-test at 5% level of significance. Meanwhile, the questionnaire was validated by two r 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. Having subjected the items in the questionnaire to reliability test, each of the values were more than 0.70; hence, the instrument is adjudged to be reliable and adequate for the study.

#### 4. RESULTS AND DISCUSSIONS

##### Bio-data of Respondents

**Table 2.** Demographic Variables of Principals and Agricultural Science Teachers in Delta State (Principals,  $n_1 = 150$ ; Agricultural Science Teachers,  $n_2 = 210$ )

Variables	Principals		Agricultural Science Teachers	
	Frequency	Percentages (%)	Frequency	Percentage (%)
<b>Sex</b>				
Male	73	48.7	106	50.5
Female	77	51.3	104	49.5
<b>Total</b>	<b>150</b>	<b>100</b>	<b>210</b>	<b>100</b>
<b>Location</b>				
Rural	70	46.7	93	44.3
Urban	80	53.3	117	55.7
<b>Total</b>	<b>150</b>	<b>100</b>	<b>210</b>	<b>100</b>

Source: Field Work (2022)

Table 2 presents the demographic variables of principals and Agricultural Science teachers in Delta State secondary schools. From the results, a little above half of the principals in Delta State secondary schools are females, as they accounted for 51.3%, while males are 48.7%. Regarding their location, 53.3% live in urban areas, and only 46.7% are in rural areas.

Table 2 also shows that most Agricultural Science teachers in Delta State are males, as they accounted for 50.6%, while that of the females is 49.5%. On location, 55.7% live in urban areas, while 44.3% are in the rural areas.

**Responses to Research Questions**

**Research Question 1:** *To what extent has Animal Husbandry been implemented as a trade subject in Delta State secondary schools?*

**Table 3.** Mean ( $\bar{x}$ ) and Standard Deviation (SD) Values on the Extent to Which Animal Husbandry has been Implemented as a Trade Subject (Principals,  $n_1 = 150$ ; Agricultural Science Teachers,  $n_2 = 210$ )

S/N	Items	Principals			Teachers		
		$\bar{x}$	SD	Rmk	$\bar{x}$	SD	Rmk
1.	Availability of competent teachers	2.99	0.87	A	3.01	0.82	A
2.	School livestock farms are available	2.00	0.83	D	1.98	0.90	D
3.	Teaching methods that promote learning are adequately deployed	2.95	0.82	A	3.05	0.83	A
4.	Collaboration between schools and communities for better implementation of the trade subject	2.37	1.01	D	2.05	0.87	D
5.	Provision of funds for practical Animal Husbandry	2.05	0.83	D	2.01	0.87	D
6.	Re-training programmes for Agricultural Science teachers	2.01	0.84	D	1.99	0.85	D
7.	Use of resource personnel from the community	2.07	0.87	D	2.07	0.87	D
8.	Regular field trips to community farms	2.14	0.88	D	2.08	0.84	D
9.	Avenues where students can showcase their skills in rearing animals through experience programmes	2.02	0.83	D	2.14	0.86	D
<b>Grand Mean (<math>\bar{x}</math>)</b>		<b>2.29</b>	<b>0.86</b>	<b>D</b>	<b>2.26</b>	<b>0.86</b>	<b>D</b>

Key: A = Agreed; D = Disagreed

Source: Field Work (2022)

Table 3 revealed the mean ( $\bar{x}$ ) and standard deviation (SD) values of principals and Agricultural Science teachers on the extent to which Animal Husbandry has been implemented as a trade subject in secondary schools in Delta State. The results show that item 1 to 9 had a grand mean ( $\bar{x}$ ) of 2.29 and SD of 0.86 for principals, while that of Agricultural Science teachers were grand mean ( $\bar{x}$ ) 2.26 and SD of 0.86. Since the grand mean ( $\bar{x}$ ) values were less than the cut-off mean ( $\bar{x}$ ) value of 2.50, it therefore indicates that the respondents generally disagreed that the Animal Husbandry trade curriculum has been effectively implemented in secondary schools in Delta State. However, item 1 and 3 had mean ( $\bar{x}$ ) values greater than cut-off mean value of 2.50 for the 2 categories of respondents, indicating that both principals and Agricultural Science teachers agreed that Animal Husbandry has been implemented in Delta State secondary schools to the extent of ensuring there is availability of competent teachers and adequate deployment of teaching methods that promote learning. Other items, such as item 2, 4, 5, 6, 7, 8, and 9 had mean ( $\bar{x}$ ) values less than cut-off mean value of 2.50, indicating that respondents disagreed that Animal Husbandry has been implemented in those areas.

**Research Question 2:** *To what extent are community-based resources available for implementing the Animal Husbandry trade subject in Delta State?*

**Table 4.** Mean ( $\bar{x}$ ) and Standard Deviation (SD) Values on the Extent to Which Community Resources are Available for Implementing Animal Husbandry (Agricultural Science Teachers,  $n_2 = 210$ )

S/N	Items	$\bar{x}$	SD	Remark
10.	Resource personnel	2.54	0.50	Available & Adequate
11.	Goat farms	2.47	0.50	Available & Adequate
12.	Piggery	2.48	0.50	Available & Adequate
13.	Snailery	2.00	0.85	Available & Adequate
14.	Grass-cutter farms	1.82	0.77	Available but not adequate
15.	Poultry farms	2.73	0.44	Available & Adequate
16.	Sheep farms	1.90	0.79	Available but not adequate
17.	Rabbit farms	1.76	0.83	Available but not adequate
18.	Bee hives	1.02	0.13	Available but not adequate
19.	Cattle farms	1.87	0.86	Available but not adequate
20.	Animal feeds	2.56	0.73	Available & Adequate
21.	Castrators	1.53	0.50	Available but not adequate
22.	Elastrators	1.52	0.50	Available but not adequate
23.	Debeakers	1.53	0.50	Available but not adequate
24.	Candlers	1.45	0.50	Available but not adequate
25.	Dehorning saw	1.49	0.50	Available but not adequate
26.	Ear notching knife	1.46	0.50	Available but not adequate
27.	Electro-ejaculator	1.48	0.50	Available but not adequate
28.	Artificial inseminators	1.50	0.50	Available but not adequate
29.	Refrigerators	2.59	0.68	Available & Adequate
30.	Vaccines	2.63	0.65	Available & Adequate
	<b>Grand Mean (<math>\bar{x}</math>)</b>	<b>1.92</b>	<b>0.58</b>	<b>Available but not adequate</b>

Source: Field Work (2022)

Table 4 presented the mean ( $\bar{x}$ ) and standard deviation (SD) values of Agricultural Science on the extent to which community resources are available for implementing Animal Husbandry in secondary schools in Delta State. From the result, the grand mean ( $\bar{x}$ ) is 1.92, and the SD is 0.58. Since the grand mean ( $\bar{x}$ ) is between the range of 1.00-1.99, it therefore means that community resources for implementing Animal Husbandry in Delta State secondary schools are available, but not adequate for use. However, item 10, 11, 12, 13, 15, 20, 29, and 30 had mean ( $\bar{x}$ ) values greater than the range of 2.00 and above, implying that resource personnel, goat farms, piggery, snailery, poultry farms, animal feeds, refrigerators and vaccines are available and adequate for use in teaching Animal Husbandry in Delta State. Furthermore, item 14, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, and 28 had mean values between the range of 1.00-1.99, indicating that these items are available, but not adequate for use in implementing the Animal Husbandry trade curriculum in Delta State secondary schools.

**Research Question 3:** *To what extent does lack of community-based resources availability constitute an impediment to the implementation of Animal Husbandry in secondary schools in Delta State?*

**Table 5.** Mean ( $\bar{x}$ ) and Standard Deviation (SD) Values on the Extent to Which Lack of Community-Based Resources Availability Constitute Impediment to the Implementation of Animal Husbandry (Principals,  $n_1 = 150$ ; Agricultural Science Teachers,  $n_2 = 210$ )

S/N	Items	Principals			Teachers		
		$\bar{x}$	SD	Rmk	$\bar{x}$	SD	Rmk
31.	It leads to poor performance of students in external examinations	3.00	0.86	A	3.51	0.50	A
32.	Ineffectiveness of the school system	3.01	0.82	A	3.50	0.50	A
33.	Poor retention capacity of students	3.05	0.86	A	3.47	0.50	A
34.	Students lack the requisite skills needed in Animal Husbandry	3.07	0.84	A	3.48	0.50	A
35.	Learning becomes more theoretical than experience-based	2.93	0.80	A	3.54	0.50	A
36.	Learning becomes boring to students instead of being interesting	3.02	0.81	A	3.44	0.50	A
37.	The objectives of the Animal Husbandry trade subject will not be achieved	3.09	0.81	A	3.50	0.50	A
<b>Grand Mean (<math>\bar{x}</math>)</b>		<b>3.02</b>	<b>0.83</b>	<b>A</b>	<b>3.49</b>	<b>0.50</b>	<b>A</b>

Key: A = Agreed; D = Disagreed

Source: Field Work (2022)

Table 5 showed the mean ( $\bar{x}$ ) and standard deviation (SD) values of principals and Agricultural Science teachers on the extent to which lack of community-based resources availability constitute impediment to the implementation of Animal Husbandry trade subject in secondary schools in Delta State. From the results, it was observed that item 31 to 37 had a grand mean ( $\bar{x}$ ) of 3.02 and SD of 0.83 for principals, while that of Agricultural Science teachers were 3.49 and 0.50, respectively, which is higher than the cut-off mean ( $\bar{x}$ ) value of 2.50. Also, the mean ( $\bar{x}$ ) for each item responded to by principals and Agricultural Science teachers were also higher than the cut-off mean ( $\bar{x}$ ) value of 2.50, implying that both principals and Agricultural Science teachers agreed that they are the extent to which lack of community-based resources constitute impediment to the implementation of Animal Husbandry trade subject in secondary schools in Delta State. Furthermore, item 37 (The objectives of the Animal Husbandry trade subject will not be achieved, 3.09) recorded the highest mean ( $\bar{x}$ ) score for principals, while that of teachers was item 35 (Learning becomes more theoretical than experience-based, 3.54).



**Research Question 4**

*What are the community-based resources needs for implementing the Animal Husbandry trade subject in Delta State?*

**Table 6**

*Mean ( $\bar{x}$ ) and Standard Deviation (SD) Values on the Community-Based Resources Needs for Implementing Animal Husbandry (Agricultural Science Teachers,  $n_2 = 210$ )*

S/N	Items	$\bar{x}$	SD	Remark
38.	Resource personnel	3.63	0.48	Needed
39.	Goat farms	3.56	0.50	Needed
40.	Piggery	3.46	0.50	Needed
41.	Snailery	3.52	0.50	Needed
42.	Grass-cutter farms	3.56	0.50	Needed
43.	Poultry farms	3.59	0.49	Needed
44.	Sheep farms	3.55	0.50	Needed
45.	Rabbit farms	3.48	0.50	Needed
46.	Bee hives	3.55	0.50	Needed
47.	Cattle farms	3.53	0.50	Needed
48.	Animal feeds	3.51	0.50	Needed
49.	Castrators	3.50	0.50	Needed
50.	Elastrators	3.43	0.50	Needed
51.	Debeakers	3.54	0.50	Needed
52.	Candlers	3.59	0.49	Needed
53.	Dehorning saw	3.35	0.48	Needed
54.	Ear notching knife	3.53	0.50	Needed
55.	Electro-ejaculator	3.43	0.50	Needed
56.	Artificial inseminators	3.55	0.50	Needed
57.	Refrigerators	3.50	0.50	Needed
58.	Vaccines	3.49	0.50	Needed
	<b>Grand Mean (<math>\bar{x}</math>)</b>	<b>3.52</b>	<b>0.50</b>	<b>Needed</b>

Source: Field Work (2022)

Table 6 revealed the mean ( $\bar{x}$ ) and standard deviation (SD) values of Agricultural Science teachers on the community-based resources needs for implementing Animal Husbandry trade subject in secondary schools in Delta State. From the results, item 38-58 had a grand mean ( $\bar{x}$ ) of 3.52 and SD of 0.50, higher than the cut-off mean ( $\bar{x}$ ) value of 2.50. Also, the mean ( $\bar{x}$ ) for each item responded to by Agricultural Science teachers were also higher than the cut-off mean ( $\bar{x}$ ) value of 2.50, indicating that Agricultural Science teachers accepted that all items are community-based resources needed for implementing the Animal Husbandry trade subject in Delta State secondary schools. High mean ( $\bar{x}$ ) scores were recorded for item 38 (Resource personnel, 3.63), 43 (Poultry farms, 3.59), 52 (Candlers, 3.59), 39 (Goat farms, 3.56), and 42 (Grass-cutter farms, 3.56).

**Hypotheses Testing**

**Hypothesis 1**

There is no significant difference between the mean ratings of principals and Agricultural Science teachers on the extent to which Animal Husbandry has been implemented in Delta State secondary schools.

**Table 7.** t-test Analysis of the Mean Ratings of Principals and Agricultural Science Teachers on the Extent to Which Animal Husbandry has been Implemented

Variables	N	$\bar{x}$	SD	Df	t-value	p-value	Remark
Principals	150	2.99	0.87	358	-0.18	0.86	Accept Ho
Teachers	210	3.01	0.82				

Significant Level = ( $p > 0.05$ )

Source: Field Work (2022)

Table 7 showed the summary of the t-test analysis of the mean ( $\bar{x}$ ) ratings of principals and Agricultural Science teachers on the extent to which Animal Husbandry has been implemented in secondary schools in Delta State. From the table, the t-value is -0.18, and the p-value is 0.86 at 0.05 alpha value. Since the p-value was greater than the alpha value, the null hypothesis was therefore accepted, showing that there was no significant difference between the mean ratings of principals and Agricultural Science teachers on the extent to which Animal Husbandry has been implemented in Delta State secondary schools.

### Hypothesis 2

There is no significant difference between the mean ratings of Agricultural Science teachers in rural and urban areas on the extent to which community-based resources are available for implementing Animal Husbandry.

**Table 8.** t-test Analysis of the Mean Ratings of Agricultural Science Teachers in Rural and Urban Areas on the Extent to Which Community-Based Resources Are Available for Teaching Animal Husbandry

Variables	N	$\bar{x}$	SD	Df	t-value	p-value	Remark
Rural	93	2.67	0.61	208	0.75	0.45	Accept Ho
Urban	117	2.60	0.68				

Significant Level = ( $p > 0.05$ )

Source: Field Work (2022)

Table 8 showed the summary of the t-test analysis of the mean ratings of Agricultural Science teachers in rural and urban areas on the extent to which community-based resources are available for implementing Animal Husbandry in Delta State secondary schools. From the table, it was revealed that the t-value is 0.75, and the p-value is 0.45 at 0.05 alpha value. The null hypothesis was therefore accepted, since the p-value was greater than the alpha value. Therefore, there was no significant difference between the mean ratings of Agricultural Science teachers in rural and urban areas on the extent to which community-based resources are available for implementing Animal Husbandry.

### Hypothesis 3

There is no significant difference between the mean ratings of principals and Agricultural Science teachers on the extent to which lack of community-based resources availability constitute an impediment to the implementation of Animal Husbandry in secondary schools in Delta State.

**Table 9.** t-test Analysis of the Mean Ratings of Principals and Agricultural Science Teachers on the Extent to Which Lack of Community-Based Resources Availability Constitute an Impediment to the Implementation of Animal Husbandry

Variables	N	$\bar{x}$	SD	Df	t-value	p-value	Decision
Principals	150	3.07	0.84	358	-5.77	0.00	Reject Ho
Teachers	210	3.48	0.50				

Significant Level = ( $p < 0.05$ )

Source: Field Work (2022)

The t-test analysis in Table 9 showed a t-value of -5.77, and a p-value of 0.00 at 0.05 alpha value. The null hypothesis was therefore rejected since the p-value is less than the alpha value. This implied that there was a significant difference between the mean ratings of principals and Agricultural Science teachers on the extent to which lack of community-based resources availability constitute an

impediment to the implementation of Animal Husbandry in secondary schools in Delta State. The high mean ratings for Agricultural Science teachers show that they are more aware of the extent to which lack of community-based resources availability constitute an impediment to the implementation of Animal Husbandry than principals.

**Hypothesis 4**

There is no significant difference between the mean ratings of male and female Agricultural Science teachers on the community-based resources needs for implementing the Animal Husbandry trade subject in Delta State.

**Table 10.** t-test Analysis of the Mean Ratings of Male and Female Agricultural Science Teachers on the Community-Based Resources Needs for Implementing the Animal Husbandry Trade Subject

<b>Variables</b>	<b>N</b>	$\bar{x}$	<b>SD</b>	<b>Df</b>	<b>t-value</b>	<b>p-value</b>	<b>Decision</b>
<b>Male</b>	106	3.64	0.48	208	0.39	0.70	Accept Ho
<b>Female</b>	104	3.62	0.49				

Significant Level = ( $p > 0.05$ )

Source: Field Work (2022)

Table 10 revealed the t-test analysis of the mean ratings of male and female Agricultural Science teachers on the community-based resources needs for implementing the Animal Husbandry trade subject in Delta State. From the table, the t-value was 0.39, and the p-value was 0.70 at 0.05 alpha value. Since the p-value was greater than the alpha value, the null hypothesis was therefore accepted, showing that there was no significant difference between the mean ratings of male and female Agricultural Science teachers on the community-based resources needs for implementing the Animal Husbandry trade subject in Delta State.

**5. CONCLUSION AND RECOMMENDATIONS**

The study generated four (4) research questions and hypotheses to determine the community resources availability and needs for implementing Animal Husbandry trade curriculum in Delta State, Nigeria. The study anchored on the Charles Prosser’s Theorems and utilized the survey method. The study’s population is comprised of 465 principals and 1,144 Agricultural Science teachers in public secondary schools in Delta State, out of which a sample size of 210 principals and 290 Agricultural Science teachers were randomly selected through the Multi-staged stratified random sampling procedure. The questionnaire was faced validated by 5 experts; Split-half reliability method yielded coefficients greater than 0.70, implying that the instrument is reliable. The questionnaires were administered with the help of 6 research assistants; who were able to retrieve 150 copies from principals, and 210 from Agricultural Science teachers, that was used for the study. Data pertaining the research questions were analyzed with percentages (%), means ( $\bar{x}$ ), and standard deviations (SD), while that of the hypotheses were tested using t-test at 0.05 level of significance. The study found that, two (2) items were rated implemented by principals and Agricultural Science teachers with regards to the extent to which Animal Husbandry has been implemented in Delta State secondary schools. Also, eight (8) items were rated available and adequate for implementing Animal Husbandry trade subject. They are: resource personnel, goat farms, piggery, snailery, poultry farms, animal feeds, refrigerators and vaccines. Furthermore, seven (7) items were rated agreed by principals and Agricultural Science teachers as the extent to which lack of community-based resources constitute impediment to the implementation of Animal Husbandry in secondary schools. They included that the objectives of the Animal Husbandry trade subject will not be achieved, learning becomes more theoretical than experience-based, among others. Lastly, twenty (21) community resources were needed by Agricultural Science teachers for implementing Animal Husbandry, such as resource personnel, poultry farms, among others. The study concludes that, community-based resource availability is the major reason impeding full implementations of Animal Husbandry Courses in Delta State, Nigeria. Hence, the study recommends that,

- i. Community resources, especially those owned by government should be made readily available to Agricultural Science teachers and students for use.

- ii. Curriculum implementation stakeholders, such as the government, principals, Agricultural Science teachers, and parents should liaise with farmers in the schools' host communities, to ensure that community resources are being utilized for implementing the Animal Husbandry trade curriculum in secondary schools.
- iii. Efforts should be made by the government and school principals to ensure that the community-based resources needed by teachers are made available for use.
- iv. Agricultural Science teachers and community farmers should be sensitized on the need for utilizing community resources in teaching students.

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