

## Upscaling Interventions in Animal Husbandry Programme in Senior Secondary Schools for Employment Creation and Sustainable National Development

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### **Abstract**

*The study was carried to identify strategies for up-scaling interventions in Animal Husbandry Programme in Senior Secondary Schools for employment creation and sustainable Development in Umuahia North Local Government Area of Abia State, Nigeria. The study adopted survey research design. Three research questions were answered and three hypotheses tested. The population was 112, which comprised 22 Principals and 90 Teachers of Animal Husbandry. Questionnaire was used for data collection. The instrument was validated by three experts and tested for reliability using Cronbach Alpha reliability method. The reliability test yielded a coefficient of 0.83. Data collected were analyzed using mean, standard deviation and t-test. Findings included strategies for infrastructural provision, retraining of teachers and strict implementation of policies on Animal Husbandry Programme. There was no significant difference in the mean ratings of the responses of the principals and teachers. It was recommended, among others, that, Federal and State Governments should adopt these findings to upscale Animal Husbandry Programme.*

**Key words:** Up-Scaling, Intervention, Animal Husbandry, Programme, Sustainable Development.

### **Introduction:**

As a way of reducing unemployment and poverty in Nigeria, the Federal Government of Nigeria introduced the teaching of Entrepreneurial Programmes, technically called Trade/Entrepreneurship Subjects. According to Nwobah(2009), a programme is an area of study that one studies at school and it has a set of planned activities with appropriate objectives, contents, methods of instructional delivery and evaluation techniques. Thirty four (34) Trade/ Entrepreneurship Programmes were approved for teaching and learning in senior secondary schools in Nigeria. According to the Federal Republic of Nigeria (FRN)(2013), the aim of the programmes are to equip secondary school students with entrepreneurial, technical and vocational skills for self reliance. It is expected that this government novel idea will strengthen the skill base of the youths and brighten their employment capabilities. One of the very popular trade/entrepreneurship programme is animal husbandry.

Animal husbandry is a new programme of study which teaches the rearing of animals in farms and ranches from young age to adult size or market weight for the purpose of food and income generation. It involves breeding and rearing of the animals

and attending to them in terms of provision of houses, feed, water, medication as well as favourable environment for the animals to grow and develop (Banerjee, 2013; Sharma, Tiwari and Sharma, 2010). The programme is offered in senior secondary schools for the purpose of preparing those who may end their education career at the senior secondary school level, to acquire entrepreneurial skills in animal production for entry in farm animal production business later in life. (FRN, 2012).Based on this, Animal Husbandry is a national programme. Therefore the result of the study is generalized. The Animal Husbandry programme is Federal Government's effort at changing the mindset of her youths from that of looking for non-existing employment to that of developing a positive attitude to self-employment and wealth creation. This government intention provided a platform for the intervention of various stakeholders in education towards the realization of the objectives of the programme.

Intervention is the involvement of individuals and organization(s) in worthwhile venture or situation in order to improve it. It is the act of being involved in difficult situation in order to help the situation (Nigerian Education Innovation Summit (NEDIS, 2016).In this study, education interventions are the various levels of involvement and actions of stakeholders which aims at repositioning the teaching of Animal Husbandry in Senior Secondary Schools for the purpose of self employment. The stakeholders are Federal, State and Local Governments, programme implementers, teachers, researchers, policy makers, technical assistant providers, donors and community leaders. Government provides the teachers and infrastructure to implement the Animal Husbandry Programme as well as monitor the school to ensure strict implementation of the programme. Government was also committed to the implementation of international agreements such as the Education For All (EFA), the United Nations Millennium Development Goals (MDGs), the National Economic Empowerment and Development Strategy (National Planning Commission,2005) as well as her own medium term development plans (FRN, 2013). These interventions helped drive significant progress in the teaching of the Animal Husbandry Programme few years after it was introduced.

However, with the turn of event, there appear to be policy summersault. The Animal Husbandry Programme suffered from insufficient and poorly administered funding, low levels of competence among teachers, insufficient monitoring mechanism, poorly motivated teachers and teachers shortages (NEDIS,2016).There was also inadequate provision of infrastructure for the teaching of the programme (Abdulla, 2012;Ugbaja,2016). Consequently, learning outcomes showed little progress for the country as a whole. Most secondary school leavers who learnt Animal Husbandry became jobless and roam the street for non-existing jobs. They cannot employ themselves either because they lack entrepreneurial skills and attitude to operate their own farm animal enterprises. The situation called for up-scaling of intervention in Animal Husbandry programme.

Up-scaling and scaling-up are used here inter exchangeably to mean increase in the amount or size of something. Up-scaling represents deliberate efforts to increase the impact of successfully tested pilot demonstration or experimental projects to benefit more people and foster development on a lasting basis (ExpandNet/World Health Organization (WHO, 2010). Up-scaling education intervention is bound to increase

teacher quality and ensure better programme planning, service delivery of teachers and better learning outcomes (Perlman, Winthrop and Mcchivney, 2016). It is therefore necessary to identify strategies for up-scaling Animal Husbandry Programme.

Strategy is a plan made in advance for success to be achieved. In the opinion of Olorok and Ibrahim (2017), it is a well planned act for achieving an aim. In the context of this study, strategy represents activities, actions or plans intended to increase the involvement of stakeholders in the teaching and learning of Animal Husbandry. Various experts have suggested strategies for up-scaling Animal Husbandry Programme in Senior Secondary Schools. According to Abdulla (2012), Ugbaja (2013) and Ugwuoke, Onah and Offor (2013) infrastructural resource provision enhances service delivery of teachers. They, therefore, opined that teachers be provided with classrooms, offices, workshops, pipe borne water and health centres. On his part, Olaitan (2017) observed that some teachers of Animal Husbandry lack technical skills in breeding, management, marketing and other aspect of farm animal production, while others have low pedagogical skills. For these reasons, teachers cannot teach the subject effectively because they cannot give what they do not have. He suggested that teachers need retraining; teachers can learn technical and pedagogical skills through conferences, seminars, in-service training in institution of learning. They can also increase their knowledge of skills of farm animal production by embarking on field trips to livestock industries or by working in such industries as apprentices (Onuka, 2017). It is also necessary for schools to collaborate with industries in order to retain teachers and strengthen education in entrepreneurship and professional ethics (United Nations (UN), 2015).

The national policy on education outlined various policies that underpin the implementation of the animal husbandry programme, but some of these policies are not strictly implemented. The policies border on proper funding of educational programmes, regular inspection or monitoring of school, as well as provision of competent teachers, facilities, classrooms and offices (FRN, 2013). Regrettably, these policies are not strictly implemented. Strict implementation of the policies could improve Animal Husbandry Programme in Senior Secondary Schools and bring about sustainable national development.

Sustainable development has been a major focus of the United Nation since the introduction of the Millennium Development Goals (MDGs) in 2000 and subsequently the Sustainable Development Goals (SDGs) in 2015. According to UN (2015), Sustainable Development is a global goals designed by the United Nations to address poverty and universal needs after the Millennium Development Goals (MDGs). The goals were designed to end poverty and hunger as well as ensure healthy living of the citizens. Howarth (2012) suggested that a sustainable future will come into being if the biophysical and social conditions needed to support economic activities are maintained from generation to the next. Therefore, sustainable future is realizable if the secondary school graduates are gainfully employed and contribute to the socio-economic wellbeing of the society by reason of up- scaled of Animal Husbandry programme.

An effective programme of Animal Husbandry needs the opinions and effective participation of principals and teachers in senior secondary schools, for they are key stakeholders in the teaching of the programme. The principals provide the necessary instructional resources and ensure that teachers do their job, while teachers teach and evaluate the performances of students to ensure the achievement of the programme objectives. Therefore, the duo is knowledgeable in animal husbandry and therefore can assist in the research process.

In Umuahia North Local Government Area, Animal Husbandry is taught in Senior Secondary Schools. Few years from 2013 when the programme was introduced, Government, communities, philanthropists and schools themselves, made concerted efforts to implement it. Accordingly, teachers and facilities were provided for teaching and learning of the subject, although most teachers have low knowledge of the programme (Olaitan, 2017). It was then mandatory for schools to rear (keep) at least one farm animal and through these means, students learn animal production business. But, few years later, these efforts began to dwindle, resulting to low academic achievement of school leavers who studied the programme in schools. Consequently, they roam the street in search of non-existing jobs, while others engage in anti-social activities such as arm-robbery, kidnapping and human trafficking to earn a living. There is therefore, a need to up-scale intervention in Animal Husbandry Programme in order to reduce anti-social activities resulting from joblessness and achieve sustainable wellbeing of Nigerian citizens. This is the basis for the study. For its hoped that the study will be useful to school authorities as it will help them to know the infrastructural resources to scale up interventions in animal husbandry programme. It is also hoped that the study will reveal retraining opportunities for teachers to improve their pedagogical and technical skills on animal husbandry.

### **Purpose of the study**

The main purpose of the study was to identify strategies for upscaling interventions in Animal Husbandry Programme for employment creation and Sustainable National Development. Specifically, the study sought to:

1. identify strategies for providing infrastructural resources for teaching Animal Husbandry Programme in senior secondary schools,
2. determine opportunities for retraining teachers of Animal Husbandry in senior secondary schools, and
3. find out what could be done to implement education policies on Animal Husbandry Programme in senior secondary schools.

### **Research Questions**

1. What are the strategies for providing infrastructural resources for teaching Animal husbandry programme in senior secondary schools?
2. What are the opportunities for retraining teachers of Animal Husbandry in senior secondary schools?
3. What could be done to implement education policies on Animal Husbandry programme in senior secondary schools?

### **Hypotheses**

The following hypotheses were tested in the study at 0.05 level of significance:

1. There is no significant difference in the mean ratings of the responses of Teachers and Principals on strategies for providing infrastructural resources for teaching Animal Husbandry in senior secondary schools.
2. There is no significant difference in the mean ratings of the responses of Teachers and Principals on opportunities for retraining teachers of Animal Husbandry in senior secondary schools.
3. There is no significant difference in the mean ratings of the responses of Teachers and Principals on what could be done to implement education policies on Animal Husbandry programme in senior secondary schools.

### **Methodology**

The study adopted survey research design. According to Feldman (2013) and Uzoagulu (2011), in a survey research, a population or a sample is asked a series of questions about their opinions or thought on a given subject. The design is appropriate for the study as it sought the opinions of teachers of Animal Husbandry and principals in secondary schools on up scaling interventions in Animal Husbandry Programme using questionnaire. The study took place in Umuahia North Local Government Area of Abia State. Animal Husbandry is taught in senior secondary schools in the area, yet in spite of interventions from various stakeholders, programme objectives seem not to be achieved as most school leavers who studied the programme roam the street in search of jobs. The population for the study was 112, made up of 90 teachers and 22 principals. The two groups of respondents are major stakeholders in the teaching of Animal Husbandry and therefore, their opinions are necessary in determining strategies for upscaling interventions in Animal Husbandry Programme for Sustainable Development. The population of the study was small and therefore, the entire population of 112 constituted the sample size. The instrument for data collection was questionnaire developed from literature reviewed. The questionnaire was structured on a four point response options of Strongly Agree (SA), Agree (A), Disagree (DS) and Strongly Disagree (SD) with corresponding value 4, 3, 2 and 1. The instrument was subjected to face validation by three experts: two from Agricultural Education Unit of the Department of Agricultural/Home Science Education and the other from Department of Measurement and Evaluation all from Michael Okpara University of Agriculture, Umudike. The instrument was also tested for reliability using Cronbach Alpha) reliability method which yielded a coefficient of 0.81. One hundred and twelve (112) copies of the questionnaire were administered and retrieved by the researcher with the help of three research assistants who were instructed on what to do before the commencement of the exercise. The data obtained were analyzed using mean and standard deviation to answer research questions and t-test statistics to test the hypotheses. The cut-off point was calculated as follows: items with mean values 2.50 and above were accepted while those below were rejected. The hypotheses of no significant difference were upheld for items whose t-calculated value were less than t-table value and rejected if otherwise.

### **Results**

Table 1:  
 Mean and t-test result of Teachers and Principals on infrastructure resources for up-scaling interventions in animal husbandry programme (N=112).

S/n	Infrastructural resources	$\bar{X}_1$	SD <sub>1</sub>	$\bar{X}_2$	SD <sub>2</sub>	G $\bar{X}$	t-cal	t-tab	Remarks
1.	Classrooms	3.47	0.64	3.00	0.94	3.24	0.74	1.98	A/NS
2.	Farm houses	2.97	0.99	3.00	1.02	2.99	0.32	1.98	A/NS
3.	Veterinary clinics	3.00	0.90	3.25	0.84	3.13	0.62	1.98	A/NS
4.	Feed mill	3.60	0.49	2.86	1.08	3.23	0.82	1.98	A/NS
5.	Projectors and slides	2.87	0.94	3.14	0.89	3.01	0.73	1.98	A/NS
6.	Workshops	2.88	0.97	2.93	0.94	2.91	0.64	1.98	A/NS
7.	Electricity generating set	3.39	0.71	3.36	0.78	3.38	0.71	1.98	A/NS
8.	Pipe borne water	3.51	0.56	3.11	0.96	3.31	0.47	1.98	A/NS
9.	Feeding and watering troughs	3.58	0.50	3.29	0.76	3.44	0.82	1.98	A/NS
10.	Decent offices	3.01	0.94	2.82	0.98	2.92	0.78	1.98	A/NS

Key: A=Agree, NS=Not significant, N=Number of respondents, t-table=1.98.

Data presented in Table I revealed that all the items score above the cut-off point of 2.50. This means that respondents agree that the items are infrastructural resources for up-scaling intervention in Animal Husbandry Programme. The table also showed that the items had their t-calculated value less than t-table value of 1.98. Therefore, there was no significant difference in the mean ratings of the responses of teachers and principals on infrastructural resources for up-scaling intervention in Animal Husbandry Programme. Therefore, the null hypothesis of no significant difference is accepted.

**Table 2:** Mean and t-test results of Teachers and Principals on opportunities for teachers to improve their skills on Animal Husbandry (N=1.98).



S/n	Opportunities for teachers to improve their skills	$\bar{X}_1$	SD <sub>1</sub>	$\bar{X}_2$	SD <sub>2</sub>	$G\bar{X}$	t-cal	t-tab	Remarks
11.	Teachers can attend workshop to learn the skills of breeding (producing young animals)	3.32	0.78	2.96	1.14	3.14	0.38	1.98	A/NS
12.	Teachers can attend conferences on farm animal production to learn better ways of stocking farm animals.	3.35	0.83	3.64	0.49	3.50	0.46	1.98	A/NS
13.	Attendance to meetings of livestock professional association(s) affords teachers the opportunity for learning new principles of livestock production.	3.36	0.55	3.61	0.69	3.62	0.42	1.98	A/NS
14.	Teachers can learn how to register farm animals business through field trips to animal production industries.	3.52	0.56	3.79	0.46	3.31	0.60	1.98	A/NS
15.	Teachers can apprentice in reputable livestock farms to increase their skills of animal production.	3.68	0.47	3.54	0.74	3.61	0.19	1.98	A/NS
16.	Regular training sessions with agricultural extension agents increase teachers' skills in livestock marketing.	3.29	0.83	2.93	1.02	3.61	0.70	1.98	A/NS
17.	Teachers can improve their teaching skills by watching more experienced teachers teach.	2.52	1.15	3.07	1.05	2.75	0.46	1.98	A/NS

*Key: A=Agree, NS=Not significant, N=Number of respondents.*

Data presented in Table 2 showed that all the items score above the cut-off point of 2.50. This implies that teachers and principals agree that they are opportunities for teachers to improve their skills on animal production. The table also revealed that the items had their t-calculated value less than t-table value of 1.98. Therefore, there was no significant difference in the mean ratings of the responses of the two groups of

respondents on opportunities for teachers to improve their skills on Animal Husbandry Programme. Therefore, the null hypothesis of no significant difference is accepted.

**Table 3:** Mean and t-test results of Teachers and Principals on what stakeholders should do to upscale intervention in Animal Husbandry Programme (N=1.98).

What stakeholders will do to up-scale animal husbandry		$\bar{X}_1$	SD <sub>1</sub>	$\bar{X}_2$	SD <sub>2</sub>	$G\bar{X}$	t-cal	t-tab	Rmk
S/n									
18.	School owners should employ only teachers with technical and pedagogical skills to teach animal husbandry in senior secondary schools.	3.71	0.46	3.82	0.39	3.77	0.60	1.98	A/NS
19.	Ministries of education and secondary education management board should visit schools regularly to ensure strict compliance to national policy on education.	3.66	0.74	0.84	0.84	3.56	0.71	1.98	A/NS
20.	Government should ensure that only schools that meet the guideline for teaching animal husbandry are licensed.	3.15	0.86	0.94	0.94	3.22	0.70	1.98	A/NS
21.	Communities should assist schools in their locality to provide pipe-borne water for farm animal production.	3.40	0.74	0.39	0.39	3.61	1.02	1.98	A/NS
22.	Schools on their own can provide some facilities for better teaching of animal husbandry.	3.36	0.81	0.69	0.69	3.43	0.46	1.98	A/NS
23.	Non-governmental agencies (NGO) can donate cash, materials or buildings to schools to encourage the teaching of the programme.	3.25	0.78	0.79	0.79	3.34	0.38	1.98	A/NS
24.	Parent teachers association can improve the implementation of animal husbandry programme by employing contract teachers and/or provide instructions resources and social amenities to the school.	3.39	0.66	0.69	0.69	3.46	0.59	1.98	A/NS

Key: A=Agree, NS=Not significant, N=Number of respondents.



Data presented in Table 3 revealed that all the items score above the cut-off point of 2.50. This means that respondents agree that the items are what stakeholders should do to upscale interventions in Animal Husbandry Programme. The table also showed that the items had their t-calculated value less than t-table value of 1.98. Therefore, there was no significant difference in the mean ratings of the responses of teachers and principals on what stakeholders should do to upscale intervention in Animal Husbandry Programme. Therefore, the null hypothesis of no significant difference is accepted.

### **Discussion of Findings**

The result of the data on Table 1 revealed that teachers and principals agreed that: classrooms, farm houses, veterinary clinics, feed mill, projectors and 5 others were infrastructural resources for scaling-up interventions in animal husbandry programme. These findings are in line with the opinions of Ugbaja (2013), Ugwuoke, Onah and Offor (2013) and Abdulla (2012) who in their separate works opined that the provision of infrastructural resources enhance service delivery of teachers. They named the resources as classroom, offices workshops pipe born water and so on.

The result of the data presented in Table 2 showed that: teachers can attend workshops to learn skills of breeding, and conferences to learn farm animal production and attend meeting of professional associations to learn new principles of livestock production. Teachers can also learn how to register farm animals business through field trips to animal production industries and others. Theses submissions supported the opinions of Olaitan (2017) that teachers can learn technical and pedagogical skills through conferences, seminars and in-services training in institutions learning. Also, it is in line with the views of Onuka (2017) that teachers can increase their knowledge and skills of farm animal production by embarking on field trips to livestock industries.

The result of the data on table 3 revealed what stakeholders should do to upscale intervention in animal husbandry programme. The items include school owners should employ teachers with technical and pedagogical skills, to teach animal husbandry in senior secondary schools, ministries of education and secondary education management board should visit schools regularly to ensure strict compliance to national policy on education, government should ensure that only schools that meet the guideline for teaching animal husbandry are licensed, communities should provide pipe borne water for farm animal production and four others. These findings are in consonant with FRN (2013) which stipulates proper funding of educational programmes, regular inspection or monitoring of schools as well as provision of competent teachers, facilities, and offices as what stakeholders should be done to improve secondary schools.

It was also found out that there was no significant difference in the mean ratings of the opinions of teachers and principals on infrastructural resources for up scaling interventions in animal husbandry programme, opportunities for teachers to improve their skills on animal husbandry and what stakeholders should do to upscale interventions in animal husbandry progrmme.

Therefore, the null hypotheses were accepted. The findings are hereby sustained by the information obtained from literature reviewed as necessary for up-scaling interventions in animal husbandry programme in senior secondary schools for employment creation and sustainable national development.

### Conclusions

The study established that intervention efforts began to dwindle few years after the introduction of animal husbandry programme in senior secondary schools. This resulted to low academic achievement of products of the programme. It was believed that up-scaling intervention in animal husbandry programme will help to achieve the objectives of the programme on employment creation. This development has provided research opportunities in this direction. The study was therefore, carried out to find out empirically, the stakeholders comments on strategies for up-scaling interventions in animal husbandry programme for the purpose of employment creation and sustainable national development.

The study had, therefore, made contributions to knowledge. It has provided information on strategies for up-scaling animal husbandry programme. The study also provided information on the expected standard of training that is need for high level performance of teachers and students.

### Recommendations

Based on the findings of the study, it was therefore recommended that:

1. Abia State government should provide the necessary infrastructural resources for effective teaching and learning of Animal Husbandry’.
2. Teachers need to embark on retraining programmes to update their skills.
3. Relevant regulatory agencies should visit schools on regular basis to ensure compliance to policies that underpin effective running of Animal Husbandry programme.

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