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DEVELOPMENT OF ENTREPRENEURIAL SKILL TRAINING MODULES IN QUAIL FARMING FOR FARMERS IN PLATEAU STATE

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Abstract

The study was carried out to develop entrepreneurial skill training modules in quail production (house construction, management, disease prevention, and control) for farmers in Plateau State. Two research questions were raised to guide the study, and two null hypotheses were formulated and tested at 0.05 level of significance. The study employed instrumentation design, which is a specific form of research and development (R & D). Mean and standard deviation were employed to answer the research questions, while t-test statistic was used to test the null hypotheses. The population was 618. The sample size was 428, consisting of 135 potential quail farmers, 113 practicing quail farmers, and 180 agricultural extension agents. Multistage sampling technique was adopted. A structured questionnaire containing 78 items was used for data collection. Experts subjected the instruments to content validation. The reliability coefficient for the instrument was determined using Cronbach alpha reliability test. It was found that 36 entrepreneurial skill items were needed for quail's house construction and management, while 24 entrepreneurial skills were needed for disease prevention, control, and management. The result found that there was no significant difference in the mean performance of potential and practicing quail farmers trained using the modules. It was recommended, among others, that entrepreneurs should make use of the modules for the purpose of conducting interviews to select qualified persons in order to improve their production and that quail production should be an integral part of the agricultural science curriculum at the junior secondary school level. It was concluded that learning took place, that potential quail farmers performed as well as practicing quail farmers, and that if potential quail farmers were engaged, using these modules, positive results would be achieved.

Keywords: Entrepreneurial Skills, Module, Quail, House construction, Disease prevention.

Introduction

The term 'quail farming' means raising quail birds either on a subsistence or commercial level (like other poultry birds) for the purpose of profitable egg and meat production. It may also be regarded as the business of raising quail birds for either domestic or commercial production of eggs, meat, or both (Lifsey, 2018). In the view of Abdul (2023), quail

farming is an agribusiness that is projected to soon be the leading poultry business in an ever-demanding country like Nigeria. Quail bird farming has positioned itself as one of the most lucrative businesses in the poultry farming industry. This is because of the substantial rate of returns in relation to the low cost of investment that it requires. In addition, the little cost of labor it requires makes it by far a better choice to venture into when compared to chicken farming.

Quail birds are an important poultry species that is fast gaining recognition in Plateau State, resulting in improved socio-economic conditions for quail farmers in the state. Today, most Nigerians, especially the elderly and the elite, are conscious of the health implications of consuming meat with high fats. Fortunately, quail birds are species with negligible quantities of fat but high protein and other nutrient contents. Furthermore, the need to ensure food security, reduce unemployment, and ensure adequate animal protein in the state calls for concerted efforts to develop skills training modules in quail production to take the village/subsistence production methods to a substantial and commercial enterprise.

In rural communities, quail production is important because of the divergent roles it plays. Sales of quail eggs, which, according to unconfirmed sources, are medically used for treatment purposes. Furthermore, live birds in urban and rural markets are perhaps one of the major sources of cash earnings available to rural families. However, Nwagu (2012) observes that the major constraint on quail production is the cost of house construction, disease prevention, control, and management, drugs, and generally poor management skills. An entrepreneur, as described by Encarta (2023), is a person who assumes the responsibility and the risk of a business operation with the expectation of making profit. The entrepreneur generally decides on the product, acquires the facilities, and brings together the labour force, capital, and production materials using the necessary skills (Obiyai 2010). Entrepreneurship involves all activities and actions needed in identifying, exploiting business opportunities, and developing expertise in the management of an enterprise, be it in the form of production, processing, or marketing. It has to do with making a living by working for one self instead of being employed by others.

For entrepreneurs to succeed in their business, they must possess some skills. The term "skill" means the ability to do something well. It is a manifestation of acquired knowledge. According to Osinem and Nwoji (2015), skill involves the acquisition of performance ability through the repetitive performance of an operation. Obiyai (2010) observed that the skills that are needed to plan, establish, and successfully run an enterprise using human and material resources are regarded as entrepreneurial skills. Thus, for individuals to acquire entrepreneurial skills in quail production, they need to be trained. Such

training could be in the form of workshops, short-term courses, participation in seminars, and further educational programs (Wever, 2015). Quail farming skills could be acquired through an apprenticeship system. In Plateau State, training in quail production could be made more effective if skill training modules are developed for that purpose.

A module is a unit of curriculum based on the development of entry-level competencies in students (Agbulu, 2010). Olaitan and Ali (1999) describe a module as a segment of an instructional programme. They stated that a module is a group of related skills arranged sequentially to be taught to a group of learners within a given frame. Quail farmers simply refer to people who engage themselves in the production of various quails and products such as meat and eggs. Studies have shown that quail farmers in Plateau use mostly traditional skills and techniques in their production process. Consequently, they obtain low returns on their efforts and sometimes drop out of business. It is further observed that the present supply of quail products such as eggs and meat for domestic and industrial uses falls short of the demand in Plateau State. This situation calls for farmers in Plateau State to improve their skills for increased output. There is therefore a need to develop skill modules in quail production for farmers in Plateau State.

Statement of the Problem

In Plateau State, quail and indeed, all other poultry species production is predominantly carried out by peasant farmers who had no training in the area of production before embarking on the enterprise. However, the researchers observed that the quantity and quality of quail products were below the quantity demanded by consumers in spite of their health and nutrition advantages over other poultry species, coupled with excellent climatic conditions that favours production on the Plateau. There is a gap between the quantity and quality of quail products supplied by the farmers and the quantity demanded by the consumers. This gives the researchers concern, motivating them to embark on the study to ensure increases in the protein supply and intake of this poultry species in the state and to reduce unemployment

Objective of the Study

The purpose of the study was to develop entrepreneurial skill training modules in quail production for farmers in Plateau State, Nigeria. Specially, the study sought to:

1. Identify the skills required for the development of entrepreneurial skill training modules for quail house construction and management
2. Identify the skills required for the development of entrepreneurial skill training modules for disease prevention, control and management

Research Questions

The following research questions were asked to guide the study.

1. What are the skills required for the development of entrepreneurial skill training modules for quail house construction and management?
2. What are the skills required for the development of entrepreneurial skill training modules for quail disease prevention, control and management?

Research Hypotheses

The following null hypotheses were formulated to guide the study and were tested at 0.05 level of significance.

1. There is no significant difference between the mean performance of quail farmers and potential quail farmers that were trained using the house construction and management modules
2. There is no significant difference between the mean performance of practicing quail farmers and potential quail farmers who were trained using quail disease prevention, control and management modules

Literature Review

The term 'quail farming, as earlier stated in the introduction, means raising quail birds commercially (like other poultry birds) for the purpose of profitable egg and meat production. Quail farming may also be regarded as the business of raising quail birds for either domestic or commercial production of eggs, meat, or both. (Abdul, 2023)

Just like chickens and other birds, quails also come in different breeds. Some grow very big and are more suitable for consumption, while others are better at laying eggs. According to Wever (2015), quail farmers who want to venture into quail farming solely for egg production should go for the layer breed and those who want to sell Quail for meat should add some broiler breeds.

Abdul (2023) sum up the advantages of quail over chicken as follows:

i. Helps with stimulating the brain and enhancing brain activity
ii. Quail eggs are also said to possess some carcinogenic properties which help to prevent and stop the growth of cancer in the body.
iii. Quail eggs help to improve the look and texture of the skin and also promote hair growth.
iv. It is also very beneficial for people that are suffering from stomach ulcers or any other digestive tract disorder.
v. Quail eggs help to increase hemoglobin levels in the body and detoxify the body. It is also good for pregnant women and helps to fight anaemia.
vi. The consumption of quail eggs is recommended for children whether cooked or raw for their physical and

mental balance. Quail eggs help to improve their IQ.

vii. Growth stimulation and metabolism improvement 100eggs

viii. Reactivate the nerves and central nervous system

ix. Quail eggs have brilliant regenerative effects on the body and therefore are recommended for the elderly. It can calm down and/or cure many diseases attributed to old age, deficiency, or excess nutrients in the body.

x. Quail eggs help to renew the state of health and bring the body to equilibrium, combat the degenerative process, and rejuvenate the body

xi. Revives memory and protects nerve cells

xii. Improves sexual potency

According to Agro4africa (2023), the popularity of quail farming in Nigeria is rising steadily due to the demand for quail meat and eggs and the news of its lucrativeness. The organization noted that the good thing about quail is that they begin laying eggs as early as 6 to 7 weeks. This is the reason why they are great for commercial farming adding that, quail production requires the application of entrepreneurial skills such as breeding and hatching, house construction and management, disease prevention, control and management.

Entrepreneurial skill as described by Agbulu (2004) as cited in Wever, (2015) is the managerial or organizational skills and processes of combining people and material resources necessary in creating utility in goods. It means developing managerial expertise in an individual through a process of education, experience or training. They are actions necessary to develop expertise be it in the form of production, processing, marketing

According to Udendeh (2006), to develop entrepreneurial, prospective entrepreneur's skills are selected after screening and testing. Those having relevant potentials are made to undertake courses designed based on their academic background, interest, aptitude, nature and type of enterprise.

Process for Developing Skills Training Modules

Okafor and Goke (2012) identified six important steps that are required in developing training module. These include: (i) Defining the problem e, (ii) Establishing objectives of the developed modules, (iii) Listing the task to perform, (iv) Stating the methods and instructions to use in delivering the task, (v) Testing the module, (vi) Documenting the module. This assertion was further collaborated by World Health Organization (2021) who maintained that the process for developing performance-based training modules includes 10 steps. The first four steps according to them constitute the task analysis which is necessary to design and develop relevant, useful training materials while steps 5-10 constitute the design and development process.

Task Analysis

Okafor and Goke (2012) outlined task analysis to include:

1. Define the target population for training
2. List the tasks to be performed by the target on the - job
3. List the skills and knowledge needed to do the tasks.
4. Select the skills and knowledge to be taught. (These make up the "training objectives)"

Design and Development

The design and development process as noted by WHO (2021) include: Organize the selected skills and knowledge into suitable teaching units (modules) and develop the training design (including brief outlines of module content and planned training methods); draft expanded outlines of modules, including instructional objectives, main body of text and descriptions of training methods examples and exercise; experts provide realistic examples and information for use in the exercise; draft the complete modules, facilitator guidelines and course director guidelines; Field-test the training materials; Revise and finalize training materials based on the field list. The target population as stated in item 1 under task analysis is the group of learners for whom the training is intended. It is critical to define this group in order to design the training appropriately. In defining the target population, the following questions are asked:

i. What are the job titles of the intended participants in the training?
ii. How were they trained for their job?
iii. What are their educational and professional backgrounds?
iv. Are they still in school or already on the job?
v. How are they accustomed to learning?
vi. What languages do they speak and read?
vii. By who are they supervised?
viii. Is it possible for them to attend a training course away from their jobs? (Nwachukwu, 2016).

Listing the Tasks to be Performed by the Target Population: To list the tasks to be performed by the target population, one must know what "good performance" is, in other words what a good performer would do on the job, Meredith, (2021) posits that training developers must have access to:

i. Technical experts who can accurately describe the job.
ii. Good performers who can be observed doing the job, and /or
iii. Documents and manuals that accurately describe the job. (Nwachukwu, 2016)

Through discussion with experts, observations and review of documents, the training developers develop a step-by-step list.

Listing the Skills and Knowledge needed to do the Tasks

For each task involved in a job, the training developers next list the skills and knowledge required to perform the task. Making a list of required skills and knowledge often necessitates more questioning of experts to explore what is involved in each task. The final list of skills and knowledge can be very lengthy, and it becomes obvious that choices must be made about while skills and knowledge are most important to teach. (Agrifarming, 2022)

Selecting the Skills and Knowledge to be taught (Training Objectives).

According to Agro4africa (2023), experts use a list of criteria to decide which skills and knowledge to include in the training. These will make up the training objectives for the course. The selection criteria may include such factors as the following. The first list below shows factors that would lead to inclusion in the course, the second list shows factors that would suggest that the skill or knowledge could be excluded in the course.

Possible Criteria for Inclusion

The possible criteria to decide which skills and knowledge to include in the training as stated by Agro4africa (2023) are:

i. Many members of the target population lack the skill or knowledge.
ii. Training (including practice and feedback) is required to learn the skill or knowledge because it is new or difficult.
iii. The task for which the skill or knowledge is needed is important to the patient's outcome.
iv. The skill or knowledge is needed frequently.
v. It is practical to teach the skill or knowledge in the given training setting.

Possible Criteria for Exclusion

i. Task, skill or knowledge cannot be described specifically and thoroughly enough to be a meaningful part of training. (This may be because of differences of opinion among technical experts, lack of authoritative evidence on how the task should best be done, etc).
ii. Teaching the skill or knowledge is not practiced in the time or with the resources available.
iii. Most members of the target population already have the skill or knowledge.
iv. The task, skill or knowledge is straight forward and could be done correctly after reading guidelines such as a check list or manual. Practice and feedback are not required.
v. The task is done or the skill/knowledge is used infrequently (e.g. it deals with a condition that is extremely rare).
vi. The task is done differently in different areas.
vii. The task for which the skill or knowledge is needed is of low

importance to the outcome of the former.

viii. There are substantial obstacles to doing the task.

ix. Another training course is available to teach the task/skills and knowledge (WHO, 2005)

Similar criteria can be used to decide which of the included tasks, skills and knowledge will receive more emphasis and practice in the training course. Designing and developing the training course steps 5-6 of the 10 steps processes include designing the training and fully developing the course based on the task analysis.

As part of the design process, the training developers organize the selected skills and knowledge to be taught into logical teaching units called modules. The design for each module includes its training objectives and a brief outline of the information, examples and exercises that will provide opportunities for practice using the skills and knowledge.

In analyzing the views and submissions of the report, World Health Organization (2021) reports five major areas which are of great importance to the development of training modules. These include:

i. Objectives of the module
ii. Content for achieving the objectives of the training module
iii. Methodology for training the target population
iv. Instructional materials required for training
v. Evaluation of the training

Instructional Materials for Training

Instructional materials are very important during training of a programme. In the view of Nwachukwu (2016), instructional materials in vocational technical education are all the practical and skill developing resources that would facilitate the processes of technical, learning and evaluation of vocation and technical skills.

Evaluation of the Programme

Evaluation helps to ascertain whether the objectives of a programme are achieved or not. Okoro (2014) defined programme evaluation as an assessment of the whole programme to determine the extent to which it was established. Programme evaluation in quail farming will collect data on the performance of the farmers on the step-by-step acquisition of skills in quail production towards the achievement of the stated objectives.

The following evaluation methods will be used: Observation, Rating scales, Group discussion to identify areas of difficulties and follow up studies

Development of complete modules requires preparation of guidelines for the facilitators who will conduct the course. Guidelines for a course director may also be needed. Finally, the modules and associated guidelines are reviewed

by technical experts and field-tested with the target population. The training materials are then revised and finalized based on reviews and results of the field test. The modules for skill training in quail production for farmers in Plateau state will encompass all these evaluation processes.

Entrepreneurial Skills for House Construction and Management

There are many kinds of quail houses. Carole (2018), outlined four main types of quail houses which include housing with run, housing without a run, housing with litter and housing with partial or complete slatted floor (wire netting or wooden slats).

The first step in planning quail and guinea fowl house construction is to consider the suitability of the environment. Proper environment is a necessity for healthy living of the flocks. The farmer should adopt traditional farm management principles depending upon the resources available at their disposal for the successful rearing of quails.

According to Agrifarming (2022), the construction of quail house involves many skills or activities such as goal setting, site identification and selection, land survey, site clearing and excavation and constant water supply, limited direct sunlight, prevention of rain from wetting the inside of the house as well as sanitation. Furthermore, the house should have a strong and solid concrete floor for easy cleaning and disinfection, constant water supply and feed. They listed some pieces of quail farming equipment that in need on your quail farmhouse include:

i. Brooder Hover,
ii. Heater/ Stove,
iii. Plastic Tick Feed Tray,
iv. Food pots,
v. Water pots,
vi. Egg-laying boxes,
vii. Electric bulbs,
viii. Defaults or balances for taking weight measurements,
ix. Buckets, a shovel, a spade, bowls, a knife, baskets, peal, tulle, etc.
x. Egg-laying house.
xi. Bamboo, wood, corrugated, polythene, or triple.
xii. Thermometer, hypermeter and,
xiii. Battery or Brooder.
xiv. Costruction of houses in a specific distance and required size;
xv. Construction of different rooms for different ages of quails must be taken seriously.

Entrepreneurial Skills in Disease Prevention, Control and Management

Infectious diseases of quails and guinea fowl species of poultry is responsible for causing huge losses are considered to be the most important factor that impedes the development o poultry enterprise (Sharma, 2010). Outbreak of Newcastle disease (ND), Infectious Bursal Disease (IBD), litchi heart disease, egg drop

syndrome (EDS), salmonellosis colibacillosis, coccidiosis etc. can lead to losses due to high mortality reduced production performances and carcass condemnation.

Programme of vaccination against diseases such as fowl pox, removal of sick birds from flock, periodic disinfection of

It is always better to prevent disease than to cure it. Sick birds will always be unproductive. Even if the birds survive a disease, they may remain unproductive for a long period and the recovered birds may be chronic carriers and transmitters of pathogenic organisms. It is vital to vaccinate birds against those diseases which are prevalent and for which a vaccine is available.

According to WHO (2021), conditions needed/suitable for Quails to prevent, control and manage disease include: Ensure the birds stays in a comfortable environment, provide control of natural light and air, protect the birds from harsh weather conditions both in summer and winter and take all the necessary precautions in order to protect against the occurrence of bad smells from the bird's uric acid.

Methods and Materials

The instrumentation research design was used for the study. This type of research design as cited in Emaikwu (2012) is suitable for the study because the study is aimed at introducing a new or modified content, procedure, technology or instrument of educational practice.

The instrumentation design is suitable for this study because its major thrust is the development of instrument, techniques for use in teaching and learning since the focus of this study is to develop training modules that was used for training, its relevance cannot be overemphasized.

The study was conducted in the Plateau state North Central Nigeria. The study is suitable for Plateau because of the conducive climatic conditions for all poultry production, the numerical strength of practicing and potential quail farmers as well as the presence of the National Veterinary Research Institute, Vom for consultations. Also as an agrarian state, quail/poultry farmers require better skills and techniques to improve the quantity and quality of their products to meet the demand of teaming consumers.

The population of the study consisted of 618 respondents. The breakdown identified 220 potential quail farmers, 190 practicing quail farmers and 208 agricultural extension agents drawn from Plateau Agricultural and Rural Development Project (PADP). The last set of the population is important because they are charged with the responsibility of training people on improved farming methods and processing techniques including quail, poultry and crop production to interested farmers.

The sample size for the project was 428. This included 135 potential quail farmers, 113 practicing poultry farmers and 180 Agricultural Extension agents drawn from Plateau Agricultural and Rural Development Project. For administrative convenience, Plateau was divided into three agro development zones namely: Western zone, Northern zone and Central zone. The zones were further subdivided into blocks: A, B, C.

The instrument for data collection is a 184 items structured questionnaire. The questionnaire was developed by the researchers based on the research questions with the assistance of experts from National Veterinary Research Institute (NVRI), Vom, Plateau state, University of Abuja and FCT College of Education, Zuba

The instrument was divided into part A and B. Part A was concerned with the general information about the respondents. Part B of the questionnaire was subdivided into sections 1and 2. Section 1 was concern with quail house construction and management. Sections 2 dealt with issues on quail disease prevention, control and management.

The instrument for data collection was subjected to content validation. One expert in quail production form NVRI, Vom as well as two experts in Agricultural Education and Agricultural Extension.

The instrument was trial tested on thirty (30) Agricultural extension agents, practicing and potential quail farmers from Nassarawa State to Longshal determine their reliability of the items and internal consistency of the instrument. The information obtained from the responses to the instrument will be analyzed using the Cronbach Alpha coefficient. The value of reliability test will be obtained

The data was personally collected by 4 researchers. A total of 265 copies of the questionnaire were administered to Agricultural Extension Agents in Plateau state, practicing and potential quail farmers.

The research data was analyzed using descriptive statistics. Precisely the mean and standard deviation was used to answer research questions while t-test statistics was used to test the research hypotheses.

All items with mean value of 2.50 and above were accepted as requiring skill for development of the modules while those below 2.50 were rejected. The standard was based on average achievement corresponding to 2.50 on the scale. Therefore, average achievement is the acceptable standard. In using the t-test to test hypotheses of no significance will be upheld at 0.05 level of significance, but where t-calculated is greater than t - table, the hypotheses of no significance is rejected. The bench mark of 2.50 is simply the mean average of the value assigned to the four response options which 4+3+2+1=20:4=2.50

Results

Table 1: Mean and Standard Deviation of Responses of Agricultural Extension Agents on Entrepreneurial Skills for Construction of Quail House

S/No	Skills	$\overline{X}$	SD	Remark
1.	Ability to survey the site for the establishment of the farm	3.06	0.91	Required
2.	Clear the site and remove stumps to facilitate pegging and excavation.	3.03	0.92	Required
3.	Peg and excavate the foundation for setting up building	3.07	0.89	Required
4.	Build the house in an East-west direction as the chicks will be less exposed to direct sunlight	3.04	0.91	Required
5.	Plant trees around the house so that its roof stays under the shade to reduce direct penetration of sunlight	3.05	0.90	Required
6.	The roof should have large over hang to limit direct sunlight and prevent rain from wetting the inside of the house	3.01	0.94	Required
7.	Build the roof as high as possible above the floor to prevent high temperature and enhance adequate ventilation	3.09	0.90	Required
8.	Build the house in such a way that there will be easy movement of workers and materials	3.03	0.93	Required
9.	A quail house will need a concrete floor	3.03	0.89	Required

Table 1 reveals that all the 9 items on the skills required for the development of entrepreneurial skill training modules on quail house construction have their mean scores above the cutoff point of 2.50.This indicates that they are relevant as skills required for the development of entrepreneurial skill training modules in quail house construction.

The standard deviation of all the items ranged between 0.89 – 0.94, meaning that the respondents agreed that, all the items presented in Table 1 are part of the skills required for the development of entrepreneurship skills training modules for quail house construction.

Table 2: Mean and Standard Deviation of Responses of Agricultural Extension Agents on Entrepreneurial Skills in Quail House Management

S/NO	Skills	$\overline{X}$	SD	Remark
1.	Ability to prevent adverse weather condition for increased productivity	3.04	0.93	Required
2.	Wire netting of about 12mm size is used to prevent snakes and hawks from harming the birds	3.03	0.89	Required
3.	Good sanitation practices and good medical facilities are required to ensure healthy growth of birds	3.03	0.93	Required
4.	Isolation of cage for sick birds to reduce the rate of contamination and disease	3.03	0.89	Required
5.	Limit the number of visitors to the house to prevent parasite and disease organisms from spreading	3.03	0.91	Required
6.	Disinfect feed sacks and equipment to destroy disease causing organisms	3.05	0.92	Required
7.	The interior of the house should be thoroughly cleaned at least once a year	3.03	0.91	Required
8.	Prompt and complete disposal of dead birds preferably by burning to reduce spread of disease	3.06	0.92	Required
9.	Prompt segregation or disposal of infected birds	3.04	0.95	Required
10.	Install self-closing doors at all entrances to prevent rodents, wild birds or insects from entering the house	3.07	0.90	Required

Table 2 reveals that all the 10 items on the skills required for the development of entrepreneurial skill training modules for quail house management have their mean scores above 2.50 cut off point for making decision. This implies that all the skill items are relevant as skills required for the development of entrepreneurial skill training modules in quail house management.

The standard deviation of all the items ranged between no. 89-0.95, meaning that the responses were that, the extension agents require entrepreneurial skill training modules for quail house management.

Table 3: Mean and Standard Deviation of Responses of Agricultural Extension Agents on Entrepreneurial Skills for Planning Quail Disease Prevention and control

S/No	Skills	$\overline{X}$	SD	Remark
1	Ability to set goals for disease prevention control and management.	3.06	0.90	Required
2	Examine the quail house for suitability	3.00	0.94	Required
3	Maintain adequate temperature, humidity and ventilation	3.06	0.90	Required
4	Check all the equipment including drinkers, feeders and light	3.00	0.95	Required
5	Determine if the flock is vaccinated against any disease	3.03	0.91	Required
6	Determine the source of vaccine	3.00	0.96	Required
7	Flock examination should be considered necessary	3.03	0.96	Required
8	Keep records and other inventory	3.01	0.90	Required
9	Raise capital for take off	3.04	0.90	Required

Table 3 reveals that all the 9 items on the skills required for the development of entrepreneurial skill training modules in planning quail disease prevention and control have their mean scores far above 2.50 cut off point which indicates that they are relevant as skills required for the development of entrepreneurial modules in planning quail disease prevention and control.

The Standard deviation of all the items ranged from 0.91 – 0.96, implying that the responses were not far from one another indicating that, the skills are required for the development of entrepreneurial modules in planning quail disease prevention and control.

Table 4: Mean and Standard Deviation of Responses of Agricultural Extension Agents on Entrepreneurship skill for Quail Disease Prevention and Control

S/No	Skills	$\overline{X}$	SD	Remark
1	Ability to maintain strict isolation from neighboring poultry farms	3.05	0.92	Required
2	Observe strict hygiene procedure at all times	3.02	0.93	Required
3	Provide clean water at all times	3.04	0.92	Required
4	Maintain adequate control of temperature	3.01	0.93	Required
5	Adequately vaccinate all flock to prevent infection	3.05	0.91	Required
6	Regularly observe the flock for any sign of disease	2.99	0.93	Required
7	Seek early advice for diagnosis and treatment	3.05	0.91	Required
8	Keep adequate records of production management, diagnosis and treatment	3.00	0.93	Required

Table 4 reveals that all the 8 items statements on the skills required for the development of entrepreneurial skill training modules for quail disease prevention and control have their mean score above 2.50 for decision making. Meaning all the skills were required for disease prevention and control. The standard deviation of all the items ranged from 0.91 – 0.93 meaning that the responses of the respondent were very close to each other. The implication of small range in standard deviation is that the respondents tend to be in close agreement that, all the skills were required for disease prevention and control.

Testing of Research Hypotheses

Hypothesis 1

Table 5: t-test Analysis for the Mean Performance of quail Farmers and Potential Quail Farmers after Training on House Construction and Management

Variables	N	$\overline{X}$	SD	df	t-cal	t-critical	Decision
Practicing Quail farmers	113	3.48	0.65	246	1.26	9.61	Accepted
Potential Quail farmers	135	3.39	0.47				

Table 5 shows that t-cal 1.26 was less than t-critical value 9.61 at 0.05 level of significance and 246 degree of freedom. It was revealed that there is significant difference between skills

and competences acquired by practicing quail farmers and potential quail farmers in quail house construction and management. This implies that the potential quail farmers learned as much as practicing quail farmers who may have been in business for some time. The upheld.

modules were, therefore; effective for both groups in acquiring skills and competencies in quail housing construction and management. Therefore, the stated hypothesis of no significant difference was

Hypotheses 2

Table 6: t-test Analysis for the Mean Performance of Quail Farmers and Potential Quail Farmers after Training on Quail housing construction and management, Quail disease prevention and control

Variables	N	$\overline{X}$	SD	df	t-cal	t-critical	Decision
Practicing Quail Farmers	113	3.52	0.50	246	-0.47	1.96	Accepted
Potential Quail Farmers	135	3.55	0.51				

Table 6 shows that t-cal -0.47 is less than t-critical value 1.96 at 0.05 level of significance and 246 degree of freedom. Based on the result, the null hypothesis was accepted. It was revealed that there is no significant difference between the skills acquired by farmers in quail disease prevention, control and arrangement. This indicates that the training module developed for quail disease prevention, control and management skills had the same effect on both practicing quail farmers and potential quail farmers. Furthermore, the result reveals that both practicing and potential quail farmers gained skills in quail disease prevention, control and management

Discussion of Findings

The findings showed that all the units of skills were required for the development of entrepreneurial skills training modules in quail house construction and management. The units are in the areas of quail house construction and quail house management skills. Each of the units had its own relevant skills, which respondents considered required for the development of entrepreneurship skill training modules in quail house construction and management. The above findings are in agreement with the views of Sharma (2010),

who identified goal setting, constant water supply, site identification, and the size of the house as some of the skills required for quail house construction and management.

The study found that two units of skills were required for the development of entrepreneurial skills training modules in quail disease prevention and control. The two units are in the areas of quail disease prevention and control. Each of the units had its own relevant skills, which respondents considered required for the development of entrepreneurship skill training modules in quail disease prevention and control. The above findings are in agreement with the views of Sharma (2010), who states that infectious diseases of quail responsible for causing huge losses are considered the most important factor that impedes the development of quail farming.

Conclusion

Based on the findings of the study, it was concluded that learning took place and that potential quail farmers performed as much as practicing quail farmers. It was also concluded that if potential quail farmers are engaged, using the right apparatus, positive results would be achieved.

Recommendations

Based on the findings of the study, the following recommendations were made by the researchers:

1. The modules developed in this study should be used by skill acquisition centers for training of farmers and others who may need it.
2. Plateau Agricultural Department Project (PADP) should encourage farmers to use the identified skills to improve quail production in the Plateau State and the nation at large.
3. The entrepreneurs should make use of the modules for the purpose of selecting qualified persons in order to improve quail production in Plateau State.
4. Quail production should be an integral part of agricultural science curriculum at junior secondary school level.

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