

PARTNERSHIP PROCESS IN TRAINING STUDENTS IN DAIRY CARE FOR HUMAN CAPITAL DEVELOPMENT AND SUSTAINABLE CATTLE PRODUCTION IN UNIVERSITIES IN NIGERIA

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Abstract: In most higher institutions in Nigeria, students acquire theoretical knowledge due to high cost of learning facilities, low technical know-how on part of instructors and absence of practical field to practice with live animals; thus, they are unable to perform as expected in the world of work. To reduce some of these problems, this study was carried out to determine partnership process in training students in dairy care for human capital development and sustainability in cattle production in Universities in Nigeria. The survey and true experimental study were carried out in two phases (The Netherlands and Nigeria between 2015 and 2022). The population for the study was 153. Two sets of instruments used for data collection were 28 questionnaire items and 25 psycho-productive multiple choice-test items. Both instruments were face validated by five experts and the internal consistency and stability of the items were determined using Cronbach alpha and test-retest methods and coefficients of 0.92 and 0.85 were obtained. The researcher with the help of two assistants collected data. Data collected were analyzed using mean and percentages to answer the research questions while correlation was used for hypothesis. The study found out that 11, 9 and 8 items were necessary in creating, acquiring and maintaining partnerships. It was recommended that these items could be utilized for better human capital development

Keywords: Partnership Process, Training, Students, Dairy Care, Human Capital Development, Sustainable Cattle Production

Introduction

Agriculture was the mainstay of Nigerian economy providing food, material resources to industries and creating job opportunities for the teeming population. Its various sectors are known to be of enormous use for the survival of animals that provide the national meat for protein requirement. United Nations (UN) and Food and Agricultural Organization (FAO) reports indicated that Nigeria has not been able to meet up with the national meat and protein requirements (Olayide & Olayemi,

2015) which could be largely attributed to low turnout from animal husbandry especially cattle production.

Cattle production is the rearing of *Bos Taurus* (cattle species) from calves to maturity for meat (beef), milk (dairy) or other uses such as manure, hides and bones. In most cattle producing countries in Africa, the problem to profitable production has been identified to include poor animal health, shortage of adequate grazing area specifically for the animals, high livestock mortality rate (20% per year) arising from nomadic system of rearing cattle, weak support from public and private



institutions, poor access to markets and livestock prices in addition to poor animal husbandry skills (Siamachira, Shumba, Mawango, Zimunya, Rusirevi, Masamha, Zengeni, Arifandaika & Nyamuzuwe, 2015). To boost animal production skills in Nigeria, programmes have always been implemented by successive governments with a bid to address problems facing the various sectors. Such programmes included Operation Feed the Nation of 1976 and Green Revolution of 1982, Nomadic Education of 2011 and Agricultural Transformation Agenda of 2014 and RUGA 2019. However few successes are reported or recorded by these programmes. The country although an agrarian country continues importation of agricultural products including animal products like beef, milk, frozen chicken among others due the failed programmes.

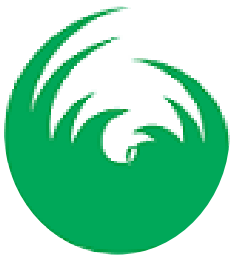
The failed programmes was as a result of many reasons among which are lack of government consistency and inability to sustain such programmes, poor youth's participation at the implementation stage of these programmes and government imposition of power on the populace in the window of democracy despite their refusal to adopt some of such programme. In 2019, it was recorded that the herdsmen are serious menace as thousands of lives are lost in many communities in Nigeria (Chaplin, 2019). As explained by some authors, the success of such programmes depended on the quality of agricultural experts in the nation as well as involvement of students of agriculture at various levels of education, mostly at post-secondary level in order to acquire skills that could enable them succeed the experts and continue implementing the objectives of the conceived programmes (Donnermeyer & Kreps, 1994; Onu & Ikehi, 2013).

In higher institutions in the country, students acquire theoretical knowledge due to cost of animals, facilities, lack of technical know-how on part of instructors and absence of practical field to practice with live animals; thus they are faced with the inability to

carry out practical activities on graduation. There are many Fulani herdsmen in different parts of the country that rear cattle but they destroy lives and properties in pretence of the quest to search for feed for their animals. It is now the usual style of the Fulani herdsmen as many of them have turned into criminals using cattle rearing as a cover; they colonize farm lands, destroying crops, killing owners of farmlands who dare challenge, rebuke or attempt to chase them away from their vicinity, thus leaving their carcass to the birds of the air to feast on before they are discovered by their families (Evelyn & Victor 2019). Due the hostile nature of these Fulani herdsmen, they cannot accommodate students learning making use of their cattle in the field or rearing cattle successfully without their help. For example in State University Ilorin, the two Fulani herdsmen were employed as instructor to care for the cattle in the campus. The University community is in fear incase they turn to attack them any time.

In Enugu State, the indigenous cattle farmers in the area are illiterate although they have practical fields with live animals like muturu, Zebu cattle among others. There are local farmers with little number of cattle (5-20) who are not hostile. Therefore, a partnership between higher educational institutions like universities and local farmers could help close the gap of no skill by students. The farmer could provide his farm with the cattle, and practical experience while the partnered students provide the learned theories resulting to modified and harmonized experiences for sustainability in the development of cattle sector.

Partnership is an understanding where parties consent to collaborate to advance their mutual interests. A partnership is the relationship existing between two or more persons or entities that join to carry out trade or business, and each person contributes money, property, labour or skill, with the hope of benefitting from the outcome (Internal Revenue Service, 2015; Investopedia,



2015). It is an agreement in which two or more bodies combine their resources in a joint cooperation with a view to making a shared benefit (Glenn, 2014). The partners in a joint endeavour may be individuals, businesses, interest-based organizations, schools, governments or combinations (Jairus, 2007). Partnerships involve agreements on policy and programme objectives and the sharing of responsibilities, resources, risks and benefits over a specified period of time (McQuiad, 2009). Organizations may partner together to increase the likelihood of the members and each achieving their mission to amplify their reach. In education, accrediting agencies increasingly evaluate schools by the level and quality of their partnerships with other schools and a variety of other entities across societal sectors as a way of accessing their community based impact. A known advantage of partnership is the exchange of skills and resources to enhance production in the shared interest. Partnership of different sector or complimentary enterprise enhances production; in this case a partnership of a member of both theoretical and practical based body in the cattle production could go a long way in improving production practices available through adequate student training.

Training refers to a systematic approach to learning and development to improve individual, team, and organizational effectiveness (Goldstein & Ford 2002; Aguinis & Kraiger, 2009). Training is a tuition process which helps people to learn how to perform a task or skill, better. Training of students is the acclimatization of learners in proven practices for enhancement in the area of instruction. In conducting specific training programmes, adequate preparation ensures that real needs of the target participants are addressed to facilitate smooth and systematic operation of the training, thus enabling attainment of the training objectives (United Nations Educational, Scientific and Cultural Organization, UNESCO, 2004). In this view,

understanding the techniques for creating, acquiring and maintaining a sustainable partnership between the skilled but uneducated cattle rearers and the educated but less skilled students of Agricultural Education in universities has become necessary to help improve practices in the area thus sustaining production to help meet the national meat and protein requirement.

Agricultural Education is the study of the principles of crop and animal production, marketing and distribution of produce and other activities that are skills oriented. Agricultural Education is often offered by Technical and Vocational Education and Training (TVET) institutions such as those available in the South East Nigeria. TVET is a comprehensive term referring to all deliberate interventions instituted or created to make learners more productive (or simply adequately productive) in designated areas of economic activities and occupations (Karen, Jason & Annette, 2008). TVET refers to those aspects of general educational processes that involve the study of technologies and related sciences, and the acquisition of practical skills, attitudes, and knowledge relating to occupations. To enhance acquisition of skills through TVET in absence of facilities, technical-know-how and practical field, creation of partnership between the university and private farmers is necessary but it was observed by the researchers that the knowledge of partnership process is lacking. This study therefore, sought to determine partnership process for training students of agricultural education in universities in South East Nigeria, specifically, the study sought to identify process of creating, acquiring and maintaining partnership in cattle rearing for sustainable animal production in South east Nigeria.

Methodology

The study adopted survey research and true experimental designs and was carried out in phases. Phase one was carried out in The Netherlands while phase two



was carried out in South East Nigeria all within six years (2015 to 2021).

Phase One: Survey training of Researchers in The Netherlands

One of the teachers of Agricultural Education, the co-ordinator of the partnership was sent for a re-training programme (with other trainees from other countries) at the Netherlands with the sponsorship of NUFFIC. The objective of the training was to expose the trainees to ideal dairy husbandry management practices through partnership training with the expert dairy farmers in Europe. The training lasted from February 16 to 2nd May 2015. During the training, the teacher observed and participated in the techniques adopted by the host institution to ensure sustainability of the partnership training programme.

At the Netherlands, the teacher developed and validated a 28 questionnaire items developed based on literature reviewed for the study and activities carried out during training, the item focused on creating, acquiring and maintaining partnership between the institution and entrepreneurs (dairy farmers). The instrument sought information on the specific purposes of the study with the aim of providing answers to the research questions. 28 questionnaire items developed based on literature reviewed for the study Each item in the questionnaire had a four response options of Strongly Agree (SA) Agree (A), Disagree (D) and Strongly Disagree (SD) with values of 4, 3, 2, and 1 respectively. The questionnaire items were face-validated by three experts, one expert planner of the dairy training programme in Onkerk in the Netherlands and two experts from Ethiopia. The internal consistency of the items was determined using Cronbach alpha method and a coefficient of 0.92 was obtained. The researcher with the help of two assistants collected the data from the respondents in the Netherlands. Data collected were analyzed using mean to answer the research questions. In taking decision on the agreed item,

a cut of point of 2.50 was considered. Therefore any item with a mean value of 2.50 or above was regarded as agreed while any item with a mean value below 2.50 was disagree. The results of analyzed data were presented in Tables 1-3.

Data presented in Table 1 on activities on creating partnership revealed that all the 11 items had their mean values ranged from 2.69 to 3.64. This showed that the mean value of each of the items was above 2.50, indicating that the 11 items were activities necessary for creating partnership for training students in dairy cattle production.

Data on acquiring partnership in Table 2 revealed that all the nine items had their mean values ranged from 3.12 to 3.57. This showed that the mean value of the items were above 2.50; indicating that the nine items were activities necessary for acquiring partnership for training students in cattle production.

Data on maintaining partnership presented in Table 3 revealed that all the 8 items had their mean values ranged from 2.67 to 3.41. This showed that the mean value of the items were above 2.50; indicating that the 8 items were initiatives required in maintaining partnership

Phase II

Phase II was trial testing the skills acquired in the Netherlands in training students of Agricultural Education in the University of Nigeria with an identified farm within the locality housing the campus. This phase was carried out as follows:

Identification of Dairy Farm

The teacher co-ordinator of the course consulted a cattle farmer at Lejja community in Nsukka local government area of Enugu State to establish a partnership with certain agreement terms making use of items in Table 1 & 2. The agreement was between the Department of Agricultural Education and farmer (Remi Nweke) on how to operate the partnership, thus requiring the farmer to make available his animals, feed and needed tools and



equipment for learning while the Department made available their students, provided transport and tea brake for the farm workers and students.

Development of test items

The researchers developed 25 items from contents of feeding, breeding/ care of calf, milking of cow, and sanitation adopting Simpsons (1972) taxonomy of criterion reference assessment of perception 10% (3 items); set 10% (3 items); guided response 10% (3 items); mechanism 25% (6 items); complex overt response 25% (5 items) and adaptation 20% (5 items). Each item had a score loading of 4%. The psycho-productive multiple choice test items were face validated by three experts, two from Department of Animal Science and one from Department of Agricultural Education University of Nigeria, Nsukka. The stability of the items was determined using test-re-test method and a correlation coefficient of 0.85 was obtained.

Training and Assessment

The developed and analyzed questionnaire items were utilized as instrument to initiate partnership training with a local cattle farmer already identified. The population for the study in this phase II was 27 students of agricultural education for 2018/2019 academic session offering the course AGE 232 –Livestock Production Education II (Ruminants); which is a second semester course. The students offering the course were divided into two groups (A=13 & B =14). First pre-test was administered on both groups of students to indicate their levels and ability groups.

Group 'A' were taken to the farm once a week (on Fridays) for a period of three months (March – June 2021) to train them practically on feeding, care of the calf and adult cattle in addition to health management practices using appropriate tools. By 1st week of July, 2021 both groups (A&B) were exposed to the same examination (post-test) which was based on psycho-productive-multiple-choice test. The average

performance of students in each item of both groups were correlated and presented in Table 4

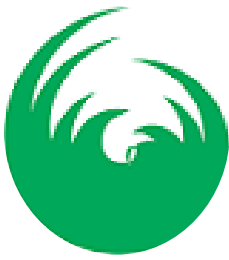
Discussion of Findings

The findings of the study were in line with the findings of Masooma (2022) who found out that all lasting relationships require a lot of work and take time to nurture; partnership is therefore, maintained to reach wider audience, complement each other, leverage a partners' authority and boost each others' domain among others. The findings of the study were also in conformity with the findings of Nic (2021) who found out that maintaining and building strong partnerships enhances company's growth as Business partnerships help create countless opportunities for succeed and stronger growth, strengthen business opportunities in addition to complementing what both businesses offer and help strengthen both sides.

The findings of the study on maintenance of partnership were in consonance with the findings of Ronald (2000) who found out that differing motivations and objectives may work together in partnership. The findings of the study on maintenance of partnership were also in consonance with the findings of Benjamin (2019) who found out that an investment in knowledge pays in terms of wealth of knowledge with strategic partnership agreements as this gives opportunity to grow and learn from another's perspective. Helen (2019) also indicated that partnership creates bond for achievement of stated objectives.

The findings were also in line with the findings of Chinedu and Olabiyi (2015) that vocational skills in collaboration helps develop in individuals for effective performance in the field work.

The findings is further in conformity with the findings of Kumar and Humaira (2017) who found that high morale employees who receive training have increased confidence and motivations as training and development has a crucial impact on the performance of



employees with regards to their job, skills especially when facilities for training are scarce.

Conclusion and Recommendations

It is the wish of schools to achieve stated objectives by training the students to acquired relevant competencies for use in the world of work. Most often, the required facilities required for production competent graduates are not available and consistent demand on the government to provide these facilities yield little or not result especially in developing countries like Nigeria. It is therefore necessary that institutions of higher learning

especially government owned ones should seek for partnerships with private owners in order to help student utilize appropriate facilities and resources that they would make use of in the world of work.

This study therefore recommended that the identified items be utilized to create, implement and maintain partnership for better learning and achievement objective of training students with relevant facilities for effective performance in the world of work like in cattle production.

Table 1: Mean Ratings of trainers and trainees on activities necessary for creating partnership for training students in cattle production in tertiary institutions in South East Nigeria

		N=80		
S/N	ITEM STATEMENT on	$\bar{X}$	SD	Decision
1	Identify the group to take part in partnership	2.72	1.10	Agree
2	Identify areas of partnership	2.69	1.09	Agree
3	Sensitize partners on their specific roles	2.67	1.00	Agree
4	Provide motivation to make them become interested in the partnership	2.95	1.19	Agree
5	Set up short memorandum of agreement for understanding (MOU) by stating what each partner should contribute.	2.75	1.05	Agree
6	Clarify issues in the partnership agreement for effective contribution	2.83	1.16	Agree
7	Appoint implementation committee leader	2.88	1.04	Agree
8	Inform trainees of their responsibilities and limitations.	2.80	1.07	Agree
9	Draw up a training plan with specified time and activities.	2.80	1.09	Agree
10	Identify resource persons and trainers as collaborators with the institution staff	3.64	0.52	Agree
11	Identify enabling materials to be contributed by each partner	3.60	0.57	Agree

[[Key: $\bar{X}$ = mean, SD = Standard deviation.

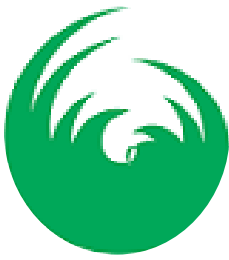


Table 2: Mean Ratings of trainers and trainees on activities necessary for acquiring partnership for training students in cattle production in tertiary institutions in South East Nigeria **N=80**

S/N	ITEM STATEMENT on	$\bar{X}$	SD	Decision
1	Clearly identify place for training within the institution catchment area	3.36	0.67	Agree
2	Install/provide necessary facilities needed for the training	3.37	0.65	„
3	Plan for lesson in modules and submit to the instructors and supporting staff	3.37	0.67	„
4	Schedule students on the programme without encroaching into other lectures	3.26	0.71	„
5	Arrange for transportation facilities for the training	3.57	0.62	„
6	Arrange for entertainment for students and trainers during each section	3.19	0.94	„
7	Arrange training in stages for the students	3.22	0.92	„
8	Instructors to evaluate students after each module	3.12	0.87	„
9	Request for peer evaluation among the trainers after the training.	3.20	0.86	„

[[Key: $\bar{X}$ = mean, SD = Standard deviation.

Table 3: Mean Ratings of entrepreneurs and Lecturers on activities necessary for maintaining partnership for training students in cattle production in tertiary institutions in South East Nigeria **N=80**

S/N	ITEM STATEMENT on	$\bar{X}$	SD	Decision
1	Provide regular reports on the agreement to partners	3.38	0.51	Agree
2	Encourage partners to keep to tenets of the memorandum of understanding	3.37	0.89	Agree
3	Trainers to send report to the institution on implementation of experiences	2.67	0.97	Agree
4	Assist beneficiaries to establish the training programme in their institution even if on micro basis.	3.06	0.79	Agree
5	Encourage beneficiaries for visits to the centre with their students experiences	3.27	0.65	Agree
6	Re-invest the income from the centre for maintenance and sustainability of the programme.	3.41	0.63	Agree
7	Schedule periodic meetings with the partners to discuss challenges and improvement strategies needs.	3.04	1.12	Agree
8	Sustain cordial relationship with the partners.	3.21	0.55	Agree

[[Key: $\bar{X}$ = mean, SD = Standard deviation.



Table 4

Correlation of the Average percentage scores of two groups of students taught livestock production II

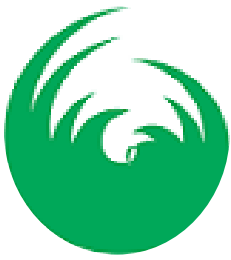
N = 25 students of Agricultural education (12Group A & 13Group B)

S/N	Summary of each of the test item	A	R ₁	B	R ₂	D (R ₁ -R ₂)	D ²
1	Manipulation of facilities in cattle pen	65	1	61	20	-19	361
2	Factors not important to consider in cattle ration	39	22	76	7	15	225
3	activities best for a dead cow	49	10	66	15	-5	25
4	The ways to milk a cow safely	53	5	54	22	-17	289
5	When a cow is ready for servicing.	48	12	71	9	3	9
6	The ideal feed for calf	50	7	65	17	-10	100
7	Services required by a cow about to calf	45	15	78	3	12	144
8	Material for dehorning	49	10	78	3	7	49
9	facilities for keeping roughages in cattle pen.	55	13	81	1	12	144
10	The best way to reduce disease infection in pen	42	19	56	21	-4	16
11	Simplest method of treating ecto-parasites	51	6	53	24	-18	324
12	Preparation for calving in cow	32	24	40	25	-1	1
13	Care of calves at birth	45	15	54	22	-7	49
14	What to do with a cow that cannot produce healthy calf	60	2	81	1	1	1
15	Necessary activity when milking a cow,	40	21	72	8	13	169
16	The order for production of a calf	47	13	71	9	4	16
17	The order followed in rearing calf	50	7	70	11	-4	16
18	order of activities to increases milk production in a cow	33	23	78	3	20	400
19	Determination of the consumption rate of calve	41	20	68	13	7	49
20	The correct order of milking a cow	45	15	66	15	0	0
21	What gives support to bull when mating a cow	54	4	78	3	1	1
22	What farmer rubs on a cow's teat after milking	30	25	68	13	12	144
23	A farmer to ensure availability of feed all the year round	44	18	65	17	1	1
24	The accurate time to milk cow	46	14	70	11	3	9
25	What a subsistence dairy farmer use for milking	50	7	65	17	-10	100



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