THE COMPETENCY NEEDS OF MALE AND FEMALE ANIMAL HUSBANDRY TEACHERS FOR TEACHING BEE FARMING IN PUBLIC SECONDARY SCHOOLS IN AKWA IBOM NORTH-WEST SENATORIAL DISTRICT.

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ABSTRACT

This study examines the competency needs of male and female animal husbandry teachers for teaching bee farming in public secondary schools within Akwa Ibom North-West Senatorial District. The research focuses on two main areas: bee yard site selection and bee hive preparation. Through a descriptive survey research design, data was collected from 136 animal husbandry teachers using a structured questionnaire developed for the study titled "Competency Need of Animal Husbandry Teachers for Teaching Bee Farming Questionnaire" (CNAHTETBFQ). The instrument was submitted to three validates for face validation. A reliability coefficient of 0.88 was obtained using Cronbach Alpha which indicated that the instrument have high internal consistency. Data collected was statistically analyzed using Statistical Package for Social Sciences (SPSS) software. Mean was used to answer the research questions. Independent t-test statistics was employed to test the hypotheses at .05 level of significance and relevant degrees of freedom. The results reveal the specific competency needs in each area, highlighting both needed and highly needed competencies. The findings suggest that both male and female teachers lack essential competencies in bee farming, particularly in bee yard site selection and bee hive preparation. Despite efforts to incorporate bee farming into the curriculum, the study shows a significant gap in practical competencies among teachers. Furthermore, statistical analysis indicates no significant difference in competency needs between male and female teachers. The study underscores the importance of addressing these competency gaps through in-service training and professional development initiatives. Recommendations include encouraging teachers to acquire necessary competencies to effectively teach bee farming, thereby preparing students for the practical aspects of animal husbandry and promoting self-employment opportunities in bee farming.

KEYWORDS: Competency Needs, Animal Husbandry Teachers, Bee Farming, Public Secondary Schools and Akwa Ibom North-West Senatorial District.

INTRODUCTION

Human through science and technology had made several discoveries one of which is the possibility of domestication of the Bee. Bees are flying insects of the monophyletic linage within the super family "Apoidea", presently classified by unranked taxon named Anthrophila. Farlex

(2013) described the bee as any of the several hairy bodied, winged, stinging insect with piercing and sucking mouth part for gathering pollen and nectar for production of honey and other bee products. Bees that produce honey are referred to as Honey-Bee. The honey-bee specie predominant in Africa is called Apis mellifera. The rearing of bees in man-made habitat is known as bee farming

Bee farming otherwise called Apiculture, is the maintenance of honey-bee colonies, commonly in hives, by humans for the purpose of producing honey, and wax (Olumese, 2018). Olaitan *et al.*, (2017) defined bee farming as an agricultural activity whereby Beekeeping farmers employ their understanding of Bee biology to provide good housing, appropriate feeding in addition to needed management practices for the purpose of harvesting honey. Nevertheless, Olusola (2018) posited that bee farming is the art of caring for, nursing, managing and manipulating Bee colony so that it will store quantities of honey and other bee products. For the purpose of this study, bee farming is defined as the scientific rearing of bees in a controlled environment with the aim of producing honey and other bee products for man's use as food and raw materials. It is also seen as the art and science of domesticating bees for production of honey, wax, income generation and employment creation. Bee farming is practiced within an Apiary (otherwise called bee-yard) by bee farmer referred to as an Apiarist. Activities in bee farming include: site selection for location of the Apiary, hive preparation, stocking of bees in hives, nursing the bees, maintaining the apiary, harvesting honey, bee wax and other bee products, storage and marketing of these products.

Bee farming is an economic venture of tremendous importance considering its products, income and employment generation potentials. Bee farming improves pollination of plants because Bees play significant role in pollinating crops. About one third of all plants and plant products eaten by humans depend directly or indirectly on bees for their pollination (FAO, 2019). In the United States of America, it is estimated that bees contribute to the pollination of over 90 crops for a value of more than N2.25 trillion (USD 15 billion) a year (Berenbaum, 2017). Okor (2011) opined that crops pollinated by bees have been proven to produce higher yields and better quality, often at no extra cost for the farmer. Honey an easily digestible carbohydrate and an excellent sugar substitute serves as food for man and raw materials as well as export commodity which yields great income to the farmer, wax is used in production of candles.

In the view of Leen *et al.*, (2015) the demand for beef products in many countries of the world is high. Olaitan *et al.*, (2017) explained that bee products are highly valued because of their food, medicinal and industrial uses. Bishop (2015) noted that bee products like pollen is considered one of the most complete natural food for man and bee itself since it is rich in protein, vitamins and minerals. Jack (2016) stated that bee products like royal jelly regulates nerve impulses, enhances the ability to think clearly, alleviates pains and inhibits ageing. These are reasons which warrant its capture into animal husbandry; a trade and entrepreneurial subject's syllabus to be taught in secondary schools. Given the technicalities involved in bee farm management, the skills in Apiculture can only be passed on to interested persons through teaching. According to Ekong (2019) the aim of teaching is to; make learners acquire cognitive, affective and psycho-productive skills embedded in what is taught and to prepare students for self- reliance and honest contribution to the development of the society.

In the teaching of bee farming in secondary school, bee-yard site selection is among the headings to be taught to student, all the criteria for suitability of a plot and location for sitting an apiary has to be mentioned to the hearing of the students and thoroughly explained to their understanding. Also certain activities involve in setting up an apiary must be demonstrated for students observation / imitation and practice to facilitate skills acquisition. Ability to perform the stated tasks depicts competency in bee-yard site selection. For effective teaching of this aspect of

bee farming, the animal husbandry teacher must be competent: knowledgeable and skillful in carrying out bee-yard site selection and setting it up. Also, the teacher should be able to explain the reason behind every action taken in the course of setting up an apiary. In addition, the animal husbandry teacher has to make known to animal husbandry students how to position each of the components of the apiary to facilitate safety of the bees and increased honey yield.

In teaching bee farming to students in secondary school, beehive preparation is an integral part that must be thoroughly explained and demonstrated by the animal husbandry teacher for students to not only have knowledge but acquire skills through practical hive building and baiting they participate in. Beehive is one of the important facilities for bee farming and a major determinant of the success of apiculture venture. Beehive is the housing facility for keeping of bees. It is usually constructed for bees to live in, brood, produce honey and perform other functions such as crop pollination. Welay and Tekleberlian (2017) asserted that there are four types of beehives namely: Langstroth hive, Top-bar hive, Warre hive and Horizontal hive. According to Agbareyo (2016), the best positioning for beehives in an apiary is facing south-east preferably free from early morning shade. This would warm the bees and encourage waking up early in the day and getting to work, finding pollen, nectar and water. All these must be accurately done so as to attract the bees into the hives and enjoy the benefits. When a bee farmer or bee farming instructor is able to perform these tasks correctly and have the bees occupy the hives, he/she is considered competent in hive preparation and installation. Teaching can only be done effectively by Teachers that have high level of competency.

Competency is an important factor in teacher quality assessment as it certainly influences a teacher's choice and use of teaching methods as well as effective service delivery. According to Effiong (2017) it takes a competent teacher to have students learn and acquire life-long skills in school, which could make them self-reliance after graduation. Being competent means being conversant with all the required skills in a process, being able to perform tasks involved at ease and also being able to explain and demonstrate for another person's understanding. Anwuka (2017) asserted that competence is a stage that could be attained after requisite exposure and training on the subject. The author added that for a teacher to be competent in teaching any concept, he or she must undergo basic training to acquire the necessary knowledge and practical abilities for effective service delivery. Bee farming is a recently introduced topic in the animal husbandry syllabus to be taught in senior secondary schools.

Animal husbandry teachers who are saddled with the responsibility to teach students bee farming must have the basic competencies needed for effective teaching of this concept as this is the only way the objectives of trade and entrepreneurial animal husbandry subject can be achieved in secondary schools. Attainment of the senior secondary school objectives greatly hinge on effective teaching which largely depend on the teachers' competency.it is on this background that this study sought to determine competency needs of male and female animal husbandry teachers for teaching bee farming in secondary schools in Akwa Ibom North-West Senatorial District.

STATEMENT OF THE PROBLEM

Bee farming is an aspect of a trade and entrepreneurial subject recently introduced at the senior secondary school level. The aim of teaching of bee farming in secondary schools is to impart basic apiculture management knowledge, practical skills and attitudes to students in order to stimulate and sustain their interest in bee farming to enhance self-reliance after graduation and further studies in tertiary institutions. It is observed in recent that animal

husbandry students seem to graduate from secondary school without acquiring the embedded apiary management skills, as they are not interested in bee farming business. Also, the current, increasing demand not being met as a result of very few bee farmers in existence raised concern on how to encourage more youths take up bee farming to increase honey, bee wax and royal jelly production and supply. Nevertheless, the persistent activities of some nefarious elements like bandits, kidnappers and even wild animals including deforestation have drastically shorten the chances of supply of honey and other bee products from the wild which necessitate and demands interventions to ensure continued supply of these products from our locals. More so, observation from chief examiners' report on animal husbandry between 2016 and 2019 on students' performance in West African Examination Council's senior school certificate examination revealed that few animal husbandry students attempt questions on bee farming and about sixty percent of them lose all the marks allotted to these questions, leaving one to question if they were actually taught the concept of bee farming properly and if the teachers teaching the subject real know and have the needed competency for effective instructional delivery. It is envisaged that the only means to stimulate and sustain students' interest in bee farming is through effective teaching and this can only be done by teachers who have requisite competencies. It is against this backdrop which really demand teachers' competency that this study sought to determine the competency needs of male and female animal husbandry teachers for teaching bee farming in public secondary schools in Akwa Ibom north-west senatorial district.

PURPOSE OF THE STUDY

The main purpose of this study was to determine the competency needs of male and female animal husbandry teachers for teaching bee farming in public secondary schools in Akwa Ibom North-West Senatorial District. Specifically, the study sought to determine:

Competency needs of male and female animal husbandry teachers in bee yard site selection for teaching bee farming in public secondary schools.

Competency needs of male and female animal husbandry teachers in bee hive preparation for teaching bee farming in public secondary schools.

RESEARCH QUESTIONS

- What are the competency needs of male and female animal husbandry teachers in bee yard site selection for teaching bee farming in public secondary schools?
- What are the competency needs of male and female animal husbandry teachers in bee hive preparation for teaching bee farming in public secondary schools?

RESEARCH HYPOTHESES

- There is no significant difference in the competency needs of male and female animal husbandry teachers in bee yard site selection for teaching bee farming in public secondary schools.
- There is no significant difference in the competency needs of male and female animal husbandry teachers in bee hive preparation for teaching bee farming in public secondary schools.

METHODOLOGY

The study would adopt descriptive survey research design. This design is considered suitable for this study because the researcher intends to solicit information from a sample which is representation of the entire population. The area of this study was Akwa Ibom North-West Senatorial District; one of the three senatorial districts in Akwa Ibom State, located in the South-South geo-political zone of Nigeria. The ten local government districts that make up the Akwa Ibom North-West Senatorial District are: Abak, Essien Udim, Etim Ekpo, Ika, Ikono, Ikot Ekpene, Ini, Obot Akara, Oruk Anam, and Ukanafun.

The population for this study was 174 animal husbandry teachers comprising of 98 males and 76 females serving in the 99 public secondary schools (State secondary Education Board, 2022) in the ten local government areas making up the Akwa Ibom North-West Senatorial District. Multi-stage sampling technique was used in selecting the sample. Firstly, simple random sampling technique would be used to select 70 secondary schools from the 99 public secondary schools in the study area. Then census sampling technique was used to select all the 136 animal husbandry teachers; consisting of eighty-two (82) males and fifty-four (54) females, serving in the 70 sampled schools spread across the ten local government areas making up the Akwa Ibom North-West Senatorial District because the number of teachers in each of the school is small. The researcher developed, structured questionnaire titled "Competency Need of Animal Husbandry Teachers for Teaching Bee Farming Questionnaire" (CNAHTETBFQ) was used for data collection. The instrument consist of three sections: A, B and C. Section A serves as introduction of the instrument to the respondents, section B was used to elicit demographic data: name of school, gender and subject taught, from the respondents while section C consist of two clusters of items totaling 34 items generated from different literatures reviewed for use to elicit data on the sub-variables of the study. The questionnaire items in section C are structured with five response options as follows: Highly Needed, Needed, Not needed, and highly not needed. The instrument was submitted to three validates for face validation. Of the three validates, One was from the Department of Educational Foundation, Guidance and Counseling, Faculty of Education and two were from the department of Agricultural Education, Faculty of Vocational Education, Library and Information Science all in the University of Uyo. These validates assessed the clarity and coverage of the questionnaire and its suitability for the study. Validates' comments were incorporated in the final copy of the instrument. Cronbach alpha coefficient was thereafter employed to analyze the data to determine the internal consistency of the instrument. This yielded the reliability coefficient of 0.88 that indicated that the instrument has high internal consistency, thus was deemed suitable for this study.

The researcher administered the questionnaire with the help of one research assistant in all the schools, sufficient time was allowed for the respondents to fill the questionnaire after which, the instrument was retrieved on the spot. Sequel to the few number of respondents per school visited, it was easy to retrieve all the questionnaires administered, giving a return rate of 100%. Data collected was statistically analyzed using Statistical Package for Social Sciences (SPSS) software. Mean was used to answer the research questions. Mean score was used to take decision on the items to answer research questions as follows: Mean value that fall within real limit range: 2.50 to 3.49 and 3.50 to 4.00 was considered needed and highly needed otherwise were considered not needed. Independent t-test statistics was employed to test the hypotheses at .05 level of significance and relevant degrees of freedom. Any hypothesis having p-value less than or equal to 0.05 ($p \leq 0.05$) was considered significant and the null hypothesis was rejected while hypothesis having p-value greater than or equal to 0.05 ($p \geq 0.05$) was considered not significant and the null hypothesis was retained.

RESULTS

The results of this study are presented following research questions answered and hypotheses tested.

Research Question 1: What are the competency needs of male and female animal husbandry teachers in bee yard site selection for teaching bee farming in public secondary schools?

To answer research question one, data collected on nine (9) of the first cluster of the instrument were analyzed and the result is presented in Table 1

Table 1: Mean and Standard Deviation of Responses on competency needs animal husbandry teachers in bee-yard site selection (n=136)

Competency Needs in Bee-yard site selection	$\bar{X}$	SD	Remarks
1. Knowledge of right size of Apiary for Subsistent or Commercial Bee farming	3.23	0.49	N
2. Knowledge of Bees' temperature / Humidity requirement	3.12	0.42	N
3. Knowledge of Bees' Habitat	3.63	0.62	HN
4. Knowledge of bees desired ecology	3.41	0.51	N
5. Knowledge of bees sensitivity to external disturbance and stinging reaction	3.46	0.55	N
6. Knowledge of bees' feed types and source	3.72	0.64	HN
7. Knowledge of bees' symbiotic relationship	3.56	0.61	HN
8. Knowledge and ability to set up an Apiary	3.81	0.72	HN
9. Knowledge and ability to secure Bee-yard against Invaders	3.78	0.68	HN

Source: Field data, (2023). SD = standard deviation, N=Needed, HN=Highly Needed

The result presented in Table 1 revealed that four items (1, 2, 4 and 5) of the first cluster on competency needs in bee-yard site selection had Mean values ranging between 3.12 and 3.46 which falls within real limit of 2.50- 3.49. This implies that these items are needed. The Table also indicates that other five items (3, 6, 7, 8 and 9) still on competency needs in bee-yard site selection had Mean values ranging between 3.56 and 3.81 which fall within real limit of 3.50 - 4.00. This implies these items are highly needed by animal husbandry teachers for teaching of bee farming in secondary schools in Akwa Ibom north-west senatorial district.

Research Question 2: What are the competency needs of male and female animal husbandry teachers in bee yard site selection for teaching bee farming in public secondary schools?
Data collected on six items in the second cluster of the instrument were analyzed to answer research question two and the result is presented in Table 2

Table 2: Mean and Standard Deviation of Responses on Competency Needs of Animal Husbandry Teachers in Bee-Hive Preparation (n=136)

Competency Needs in Bee-Hive Preparation	X	SD	Remarks
1. Knowledge of types of bee-hives and the best for modern Bee Farming	3.61	0.72	HN
2. Knowledge of appropriate materials for	3.54	0.67	HN
3. construction of modern bee-hive	3.54	0.67	HN
4. Knowledge and ability to construct Bee-hive according to specification	3.85	0.83	HN
5. Knowledge and ability to clean beehive and position it well for bees to live in	3.48	0.52	N
6. Knowledge of types of bee baits and their sources	3.67	0.79	HN
7. Knowledge and ability to apply baits to bee-hive to attract swarm of Bees	3.76	0.84	HN

Source: Field Data (2023) SD = standard deviation, N=Needed, HN=Highly Needed

The result of data analysis presented in table 2 showed Mean value of item 4 on competency needs in bee-hive preparation is 3.48 which fall within real limit of 2.50-3.49 implying this competency is needed by animal husbandry teachers. The result displayed on Table 2 also indicated that five items (1, 2, 3, 5, and 6) on competency needs in bee-hive preparation had Mean values ranging between 3.54 and 3.85 which fall within real limit of 3.50-4.00. This implies that these five items are highly needed by animal husbandry teachers for teaching bee farming in secondary schools in Akwa Ibom north-west senatorial district.

Hypothesis 1: There is no significant difference in the competency needs of male and female animal husbandry teachers in bee yard site selection for teaching bee farming in public secondary schools.

The testing of hypothesis one was carried out using t-test statistic and the result is presented in Table 3.

Table 3: Independent samples t-test comparison of means difference in the competency Needs of male and female animal husbandry teachers in bee-yard site selection for teaching bee farming in public secondary schools in Akwa Ibom North-West Senatorial District. (n= Male=82, Female= 54)

S/N	Competency Needs in Bee-yard site selection	$\bar{X}_1$	$\bar{X}_2$	t-cal	p-value	Remarks
1.	Knowledge of right size of Apiary for Subsistent or Commercial Bee farming	3.50	3.36	1.27	0.205	NS
2.	Knowledge of Bees' temperature / Humidity requirement	3.37	3.22	1.36	0.175	NS
3.	Knowledge of Bees' Habitat	3.44	3.29	1.19	0.235	NS
4.	Knowledge of bees desired ecology	3.41	3.26	1.17	0.218	NS
5.	Knowledge of bees sensitivity to external disturbance and stinging reaction	3.60	3.54	0.58	0.557	NS
6.	Knowledge of bees' feed types and source	3.62	3.56	0.54	0.585	NS
7.	Knowledge of bees' symbiotic relationship	3.46	3.59	1.18	0.239	NS
8.	Knowledge and ability to set up an Apiary	3.41	3.20	16	0.032	S
9.	Knowledge and ability to secure Bee-yard against Invaders	3.16	2.81	2.78	0.006	S

Source: Field Data, (2023).NS=Not Significant, S= Significant, df=134, Sig@P≤.05, $\bar{X}_1$, $\bar{X}_2$= Means

The result of the independent samples t-test comparison of the difference in the means responses of male and female animal husbandry teachers on competency needs in bee-yard site selection for teaching bee farming in public secondary schools in Akwa Ibom north-east senatorial district presented in Table 3 showed calculated t-values of seven items (items: 1, 2, 3,4,5,6 and 7) range from 0.54 to 1.36 and the p-values ranged from 0.175 to 0.585 at 134 degree of freedom. Since the p-values are greater than 0.05 alpha level ($p \geq 0.05$), it implies that there is no significant difference in the competency needs of male and female animal husbandry teachers in respect of these items.

The Table also indicated that the calculated t-values of two items (items: 8 and 9), were 2.16 and 2.78 and their respective p-values were 0.032 and 0.006 at 134 degree of freedom. The p-values being less than 0.05 alpha level ($p \leq 0.05$), implies that there is significant difference in the competency needs of male and female animal husbandry teachers in respect of these two competencies. The result in Table 3 showed no significant difference in 7 out of 9 competencies; this permitted the

null hypothesis which states that: There is no significant difference in the competency needs of male and female animal husbandry teachers in bee yard site selection for teaching bee farming in public secondary schools to be retained; Therefore, the null hypothesis was retained. The result implies that both genders needs to possess adequate competency levels in bee yard site selection to be able to teach this aspect of bee farming in public secondary schools in Akwa Ibom North-West Senatorial District.

Hypothesis 2: There is no significant difference in the competency needs of male and female animal husbandry teachers in bee hive preparation for teaching of bee farming in public secondary schools in Akwa Ibom North-West Senatorial District.

The testing of hypothesis two was carried out using t-test statistic and the result is presented in Table 4.

Table 4: Independent samples t-test comparison of means difference in the competency Needs of male and female animal husbandry teachers in bee-Hive preparation for Teaching bee farming in public secondary schools in Akwa Ibom north-west senatorial district. (n= Male=82, Female= 54)

S/N	Competency Needs in Bee-Hive preparation	$\bar{X}_1$	$\bar{X}_2$	t-cal	p-value	Remarks
1.	Knowledge of types of bee-hives and the best for modern Bee Farming	3.53	3.64	1.12	0.261	NS
2.	Knowledge of appropriate materials for construction of modern bee-hive	3.49	2.86	1.28	0.203	NS
3.	Knowledge and ability to construct Bee-hive according to specification	3.51	3.25	2.72	0.007	S
4.	Knowledge and ability to clean bee-hive and position it well for bees to live in	3.43	3.37	0.51	0.605	NS
5.	Knowledge of types of bee baits and their sources	3.39	3.24	1.44	0.151	NS
6.	Knowledge and ability to apply baits to bee-hive to attract swarm of Bees	3.13	3.24	0.94	0.347	NS

Source: Field data, (2023).NS=Not Significant, S=Significant, df= 134, Sig@P≤.05, $\bar{X}_1$, $\bar{X}_2$=Means

The result presented in Table 4, showed summary of t-test analysis of difference in the mean responses of male and female animal husbandry teachers on competency needs in bee hive preparation for teaching bee farming in secondary schools. The result showed calculated t-values of five items (items: 1, 2, 4, 5 and 6) ranged from 0.51 to 1.44 and their p-values ranged from 0.151 to 0.605 at 134 degree of freedom. Since the p-values are greater than 0.05 alpha level ($p \geq 0.05$), it implies that there is no significant difference in the competency needs of male and female animal husbandry teachers in respect of competencies in these items. One item in this result cluster (item 3) had calculated t-value of 2.72 and p-value of 0.007. Since the p-value is less than 0.05 alpha level ($p \leq 0.05$), it implies that there is significant difference in the competency needs of male and female animal husbandry teachers in respect of this particular competency. From the result, five out of six items had it that there is no significant difference in the competency needs of male and female animal husbandry teachers in respect of those competencies as such, the null hypothesis which states that: there is no significant difference in the competency needs of male and female animal husbandry teachers in bee hive preparation for teaching bee farming in

secondary schools was retained. The result implies that animal husbandry teachers irrespective of genders must possess these necessary competencies to live up to expectation in teaching bee farming in public secondary schools in Akwa Ibom North-West Senatorial District.

DISCUSSION OF FINDINGS

The findings from result presented in Table 1 revealed that of the competencies in bee-yard site selection, four items are needed while five items are highly needed by animal husbandry Teachers for teaching of bee farming in public secondary schools in Akwa Ibom North-West Senatorial District. The corresponding t-test analysis result presented in Table 3 indicated that there is no significant difference in the competency needs of male and female animal husbandry teachers in bee-yard site selection for teaching bee farming in public secondary schools in Akwa Ibom North-West Senatorial District. Therefore, male and female animal husbandry teachers require all the identified competencies in bee-yard site selection namely: knowledge of right size of Apiary for subsistent or commercial Bee farming, knowledge of Bees' temperature and humidity requirement, knowledge of Bees' habitat, knowledge of bees desired ecology, knowledge of bees sensitivity to external disturbance and stinging reaction, knowledge of bees' feed types and source, knowledge of bees' symbiotic relationship, knowledge and ability to set up an Apiary as well as knowledge and ability to secure Bee-yard against invaders.

It is an unfortunate situation that more than a decade since the introduction of bee farming through the senior secondary school animal husbandry syllabus that most teachers assigned to teach the subject are still in need of the basic competencies which would enable them teach important components of the syllabus like bee farming. Animal husbandry teacher's lack of these competencies will significantly affect the teaching of bee farming in secondary schools since doing so begins with explaining and demonstrating site selection and setting up an Apiary. Competency facilitates effective service delivery, where animal husbandry teachers do not have requisite knowledge and abilities to teach bee farming beginning from construction of bee-yard, the students will not find learning interesting and will be dissuaded from venturing into bee farming. Major examination bodies like West African Examination Council and National Examination Council have requested Federal and State Governments to provide facilities and competent manpower to teach the students every contents of the animal husbandry syllabus so as to equip the students with knowledge and skills to pass examination and be able to function in the world of work. This directive should not fall on deaf ears as only competent Teachers can actually teach and impart knowledge and psych-productive skills that can guarantee self-employment and self-reliance of students after graduation.

It is disheartening to note that even when the demand for honey by human beings and industries is increasing on daily bases, not much effort is made to encourage secondary school students to embrace bee farming so as to increase the number of bee farmers and supply of bee products. Where the teachers who are saddled with the responsibility to impart requisite knowledge and skills in bee farming to students do not have the knowledge and practical competencies how will they be able to teach the students, how will the students who are not taught bee farming develop interest, acquire the knowledge and skills in bee farming and be willing to practice after graduation as a means of self-reliance? It is impossible to have the same performance result from a trained and competent teacher and an untrained and incompetent teacher.

According to Nsa, et al (2016), teaching for transfer of specialized knowledge and competencies demands more than talking or discussion to practical demonstration; as such, the

observed incompetency among male and female Animal Husbandry Teachers in bee-yard site selection should be addressed by both the teachers and relevant authorities. The findings that there is no significant difference in the competency needs of male and female animal husbandry Teachers in bee-yard site selection for teaching bee farming is true given the fact that these Teachers irrespective of gender have the goals to achieve that is; imparting knowledge and practical competencies to students. So to leave up to expectation, they must be equally equipped.

However, this finding is in line with that of Akuma (2019) that inadequacy of competent manpower hinders teaching of apiculture as a component of animal husbandry in public secondary schools. The findings also tallies with Gbenga (2016) that animal husbandry curriculum as a whole is implemented in principles not in practice as a result of teachers' lack of practical competencies in most areas covered by the curriculum. More so, this finding also agrees with that of Busede (2018) that teachers incompetency accounts for non-coverage of the syllabus in most public secondary schools, making students not fully prepared for external examination.

Observations from this finding informed that Akwa Ibom State Government and State Secondary Education Board had not done enough in terms of Teachers' in-service training to boost their capacity to teach entrepreneurial subjects like animal husbandry as reflected in the lack of competency to teach this stage of bee farming. Increased effort in equipping animal husbandry teachers is advocated for as this would enhance Teachers' practical demonstration of Bee-yard site selection and establishment, affording students the opportunity to have hands on practical experience.

The result of Findings displayed in Table 2 revealed that five of the six identified competencies in bee-hive preparation are highly needed while one is needed by animal husbandry Teachers for teaching bee farming in public secondary schools in Akwa Ibom North-West Senatorial District. In Table 4, corresponding t-test analysis result there indicate that; there is no significant difference in the competency needs of male and female animal husbandry teachers in bee-Hive preparation for teaching bee farming in public secondary schools in Akwa Ibom North-West Senatorial District. This finding vividly shows that animal husbandry teachers do not have these identified competencies in bee hive preparation. This situation would negatively affect their performance when it comes to teaching housing for bees practically. In bee farming, the paramount thing is housing followed by feeding, where an intending person is not informed and guaranteed of safe housing for the stock, he will not accept to go into bee farming knowing that bees not properly housed would escape and disturb human beings in the neighborhood. Bee hives can be locally made and this will make it easier and cheaper for a new bee farmer than importing. This is why animal husbandry teacher must have the competency to discuss bee hive types and their suitability for commercial or small scale bee farming and in addition by able to construct one for the learners to learn the techniques by observation. To effectively teach bee farming, Animal Husbandry teachers irrespective of gender, needs these identified competencies in bee-hive preparation and effort to ensure the teachers have it will not be a waste because principles of vocational education prescription is that the teacher irrespective of gender should be competent in the subject areas he or she will be teaching others so as to be effective in service delivery.

Besides, given the findings of Onyejekwe (2016) that teacher's factors such as incompetence, accounts for students' lack of skill acquisition in poultry husbandry, ensuring that animal Husbandry teachers acquire this specified competency in bee hive preparation would enable proper teaching of bee farming. Moreover, Teachers' competency in all aspect of subject

of specialization has been pointed by Azunku (2019) to be key consideration when employing Teachers for teaching of vocational subjects. This finding also conforms to that of Halson that competency is the most important need of a teacher that will guarantee his/her employment. The observed competency in hive preparation need of the Animal Husbandry teachers should be taken care of through joint effort of the teachers and education authorities for effective teaching of bee farming.

CONCLUSION

Bee farming, being a vocational area of specialization can be fully harnessed by encouraging and empowering more young people to venture into it. The best means of doing this is by effective teaching of Apiculture aspect of animal husbandry in line with principles of vocational education. Since this can only be done by highly experienced and competent teachers, animal husbandry Teachers must have requisite knowledge and competencies in bee farming to be able to impart the necessary bee farming knowledge and psycho-productive skills to secondary school students, making them prepared for the world of work.

RECOMMENDATIONS

Considering the findings of this study, the following recommendations are made:

- Serving and would-be animal husbandry teachers should ensure they acquire competency in bee-yard site selection to boost their capacity to effectively teach bee farming to secondary school students.
- Both male and female animal husbandry teachers should acquire competency in bee hive preparation so as to be able to impart practical skills to students.

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