

Re-Focusing Animal Management Education to Encourage Nomadic Career Life Skills in Adamawa State, Nigeria

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Abstract— This paper sets out to study the re-focusing of animal management education to encourage nomadic career life skills in Adamawa State, Nigeria. The National Commission for Nomadic Education (NCNE) is charged with the responsibility of providing education to children whose parents are in nomadic life, as well as adult and non-formal sectors. The paper is based on two research questions, two objectives, and two corresponding hypotheses tested at a 0.05 level of significance. The research design for this study is correlation research design, and it used a multistage sampling technique in selecting 465 respondents comprising 12 supervisors, 51 head teachers, 228 nomadic teachers, 153 pupils, and 51 parents. The instruments for data collection include a questionnaire, observation checklist, and interview guides. The hypotheses were tested using simple linear regression analysis at a 0.05 level of significance. The first hypothesis revealed an unstandardized coefficient value of 0.341 and $p = 0.00$, which is less than the hypothetical value of 0.05. This stated that elementary science encourages nomadic education curriculum on critical thinking in Adamawa State. The second hypothesis revealed an unstandardized coefficient value of 0.434, with $p = 0.00$, which is less than the hypothetical value of 0.05. This stated that animal management induces nomadic career life skills in Adamawa State. The acceptance of all alternative hypotheses makes it feasible for the study to conclude that animal management encourages nomadic career life skills in Adamawa State, Nigeria. The study recommends, among others, that key actors (teachers) in nomadic schools should be provided with career life skills to encourage nomadic career life skills.

Keywords— Re-focusing, Animal Management, Nomadic Career Life Skills, Adamawa State, Nomadic education, Agricultural education, Livestock management, Career development, Pastoralists.

I. INTRODUCTION

Education is a social right in itself and a key means of realizing other human rights, particularly the right to education. It is seen as an empowerment right. Education is the primary vehicle by which economically and socially disadvantaged adults and children can lift themselves out of poverty and acquire the means of full participation in their communities. It also plays a significant role in empowering women, protecting street-working children from unequal and dangerous labor and sexual abuse, promoting human rights and democracy, protecting the environment, and controlling population growth (UNESCO, 2014).

The philosophy of Nigerian education is based on the integration of the individual into sound and effective citizenship with equivalent educational opportunities for all and at all levels through the formal and non-formal school system. More significantly, the government of Nigeria believes that the provision of well-designed education is the crucial means of improving the socioeconomic condition of the rural populace. Among such populaces, predominantly pastoralist nomads and migrant fisherfolk are difficult to reach. This was revealed by their participation in existing formal and non-formal education programs, which are abysmally low, with literacy rates ranging between 0.02% for pastoral nomads and 2.0% for migrant fisherfolk as at the early stage of implementing Nomadic Education (National Commission for Nomadic Education [NCNE], 2017).

Pastoral nomads perceive themselves as significant people, as noted by Okugagu (2015), who stated that they play a significant role by being the main suppliers of beef, mutton, hides and skins, hoof, horn, dung for manure, bones, and cow urine used in the production of medicine. They also play a significant role in agriculture by providing natural manure that restores soil fruitfulness and the payment of cow tax "janjali," which is one of the significant sources of internally generated revenue of the nation. They should unquestionably be analyzed as a significant segment of the nation's economy that should be given consideration in the distribution of amenities and provision of education, which they are unfortunately inadequately provided.

Nomadic life in Nigeria has several categories. This includes nomadic hunters, fishermen, pastoral nomads, nomadic mallams (Almajiri teachers), migrant laborers, and migrant farmers. Commonly, nomads live in low-density remote areas, which in most cases pose some difficulty in getting their family data. This in turn renders it difficult to get accurate data in respect of nomadic life in the communities and thus on education. It was against this background that the Nomadic Education program was designed to cater for the education of children of the nomads because they generally do not have access to the traditional school system due to their nomadic lifestyle (Bello, 2019).

It is often difficult to capture this group during government censuses; however, there are an estimated 9.4 million nomads in Nigeria. Over 5 million are nomadic pastoralists, while the remainder are nomadic farmers and fishermen, found mostly around the Chad River basin in north-eastern Nigeria (John, Tyndall, Okoye, & Osewe, 2018). Nomadic pastoralists are a composite of many different ethnic groups; however, over 90% belong to the Fulfulde or Fulani tribe, which represents 6.6% of the Nigerian population. Adamawa has an estimated 450,000 nomadic Fulani pastoralists across the 21 Local Government Areas of Adamawa State, making it the State with the highest population of nomads in Nigeria. The greater majority (90%) of nomadic Fulani who have no access to western education is a source of potential challenge to the nation's overall development (John et al., 2018).

It is important to note that nomads in Nigeria play an important role in being major suppliers of beef, mutton, hides and skins, hoof, horn, dung for manure, bones, cow urine used in medicine production, and food security. About 95% satisfy their compatriots' protein needs; indisputably, they are part of the nation's economy (Abdulrahman, 2016). The "jangali" animal tax which they pay should further elicit pity and consideration in the distribution of amenities, which they are unfortunately deprived. It has also been argued that the nation's security would never be fully achieved until every citizen knows his/her full responsibilities through the provision of quality basic education for all (Abdulrahman, 2016). It is against this background that the present study intends to carry out "Re-Focusing Animal Management Education to Encourage Nomadic Career Life Skills in Adamawa State, Nigeria."

II. STATEMENT OF THE PROBLEM

Nomads constitute a segment of the Nigerian population. However, despite their proportion in the Nigerian population, nomads remain a special group whose economic, socio-cultural, and political potentials are yet to be tapped to the optimum (Abubakar & Ogugua, 2015). Various empirical works have identified series of gaps between government and national development. Specifically, Bello (2019) discovered that the level of literacy on Animal Management Education life skills remains low among nomads despite the adoption of the United Nations' Education for All in Nigeria.

Earlier works by Ezeomah (2016), Aminu (2014), Umar (2018), and Abba (2018) have shown that the participation of nomadic people in formal education and Animal Management Education was low, which was largely attributed to their low level of appreciation of conventional education, disagreement between their occupational schedules and the formal school calendar, and the critical role of children in their production chain, which makes them extremely reluctant to send their wards to school.

Therefore, the peculiar lifestyle of animal management education among nomads in Nigeria could be argued to make it difficult to participate in the formal education system, despite the fact that they share a large proportion of the Nigerian population as well as play important roles in the nation's economy, nutrition, and the transhumance techniques of livestock production.

More so, some authors have attributed their low level of participation in formal education to the gap created in the nomadic education curriculum, which seems to be disproportionate to the lifestyle of nomads of continuous movement with herds in search of food for livestock (Maxwell, Iroegbu & Onyenso, 2018). There are also those with the view that the lack of involvement of the nomads in the design of curriculum led to the inclusion of irrelevant curriculum contents that are unfavorable to the needs of the nomads' education requirements (Muhammad and Aliyu, 2017; Jeffs & Smith, 2018; Chris, 2019).

Lamb, Maire, and Doecke (2017) observed that obviously, relevant Animal Management Education and life skills of the 21st century are essential in promoting effectiveness in animal management. A failure in these respects is bound to impact negatively on the quality of animal management education of the nomadic child. Evidence from reviewed literature showed that the majority of studies were being conducted with focus on various aspects of nomadic education within and outside Nigeria, which creates a gap regarding animal management education and life skills among nomads. More so, none of the few empirical studies conducted within Nigeria took animal management education and life skills in the North-East as a case study. This shows that most studies are silent about implementation strategy for 21st-century nomadic education curriculum.

Therefore, various inputs towards animal management education and life skills nomadic education in Adamawa State, Nigeria, there is hardly evidence of nomadic products with animal management education and life skills among nomadic people in the state has been poor. What could be responsible for the inability of this laudable program to impact positively on the intended nomads in the state? Is the program lacking in the amount of attention it needs in terms of animal management among nomads or the provision of devoted teaching staff to implement the modern life skills to the nomads and modern infrastructural development of educational institutions? Therefore, this study set out to re-focus Animal Management Education to Encourage Nomadic Career Life Skills in Adamawa State, Nigeria.

III. PURPOSE OF THE STUDY

The main purpose of the study is to re-focus Animal Management Education to encourage Nomadic Career Life Skills in Adamawa State, Nigeria.

3.1 Specific Objectives

- 1) Determine the extent to which agricultural education encourages nomadic education curriculum on career life skills in Adamawa State.
- 2) Determine the extent to which animal management encourages nomadic education curriculum on career life skills in Adamawa State.

3.2 Research Questions

The study attempted to answer the following research questions:

- 1) To what extent does agricultural education induce nomadic education curriculum on career life skills in Adamawa State?
- 2) To what extent does animal management induce nomadic education curriculum on career life skills in Adamawa State?

3.3 General Hypothesis

Animal Management Education encourages Nomadic Career Life Skills in Adamawa State.

3.4 Hypotheses

- 1) Agricultural education induces nomadic education curriculum on career life skills in Adamawa State.
- 2) Animal management induces nomadic education curriculum on career life skills in Adamawa State.

IV. THEORETICAL FRAMEWORK

4.1 Theory of Shulman's Pedagogical Content Knowledge (PCK)

The study is guided by a modified model of pedagogical content knowledge theory propounded by the ideas of Shulman (1986, 1987) regarding pedagogical content knowledge, often abbreviated as PCK. The theory states that "particular outline of content knowledge that embody aspects of content most connected to its teachability" (Shulman, 1986). He first introduced the PCK concept into the educational realm after he had noticed that policies in the 1980s that dealt with teacher ability neglected content and focused mainly on basic pedagogy. He also understood that there was a gap in research regarding subject matter content and that research literature on subject matter content teaching was lacking. This lack of content in research interpreted into policymakers also ignoring it when setting standards for teacher competency evaluations. "No one asked how subject matter was transformed from the knowledge of the teacher into content of instruction" (Shulman, 1986).

In the context of nomadic education, PCK is particularly relevant because teachers need to transform agricultural and animal management content into forms that are pedagogically powerful and yet adaptive to the nomadic lifestyle. This requires teachers to understand not only the subject matter but also the unique cultural and occupational context of nomadic learners.

V. METHODOLOGY

5.1 Research Design

The correlation research design was used for this study. A correlation study was used since it is intended to investigate the relationship between the variables under study (Curtis, Comiskey, & Dempsey, 2016). Also, Creswell (2012) stated that correlation research design investigates the relationship between two variables without manipulation of one variable over the other. These views also imply that the researchers in this research do not attempt to control or manipulate the variables as in an experiment. This study used an explanatory design since the study investigated the degree of association between two variables.

5.2 Population of the Study

The population for the study encompasses 20 supervisors, 140 head teachers, 529 nomadic teachers, 23,385 pupils, and 828 parents respectively, distributed across the five educational zones of Adamawa State. The schools are located in each local government in Adamawa State excluding Yola North. This is because the Yola North Local Government Area does not run any Nomadic Education program separately.

TABLE 1

TEACHING STAFF, TEACHERS, PARENTS, AND STUDENTS IN NOMADIC SCHOOLS IN THE EDUCATIONAL ZONES OF ADAMAWA STATE BY 2020

S/ N	Educational Zones	No. of Supervisors & H/Teachers		No. of Classroom Teachers	No. of Pupils	No. of Parents
1	Ganye	4	42	172	6316	201
2	Gombi	3	20	69	3509	120
3	Mubi	5	18	79	3455	139
4	Numan	5	28	63	4292	128
5	Yola	3	34	146	5813	240
	Total	20	140	529	23385	828

Source: Nomadic Education Unit ADSUBEB, Yola (2020)

5.3 Sample and Sampling Techniques

The sample size for this study is 465, comprising 12 supervisors, 51 head teachers, 228 nomadic teachers, 153 pupils, and 51 parents. The study adopted a multistage sampling technique. At the first stage, the study selected three out of five education zones: Ganye, Mubi, and Yola, because nomadic schools in all zones shared similar characteristics. Furthermore, the Ganye, Mubi, and Yola education zones were selected due to high viability of many schools in those zones. At the second stage, the study purposively selected all 12 supervisors found in the three selected education zones, while a total of 51 head teachers were randomly selected across the three selected zones at a rate of 17 head teachers per education zone.

Also, the sample size of 228 was determined for teachers from their population of 529 using the Taro Yamane formula:

$$n = \frac{N}{1+N(e)^2} \quad (1)$$

Where:

- N = Total population (529)
- e = Level of significance (0.05)

- n = Sample size

$$\text{Then, } n = \frac{529}{1+529(0.05)} = 228$$

Based on this formula, the sample size for nomadic teachers is 228. Therefore, the 228 teachers were chosen at random, with 76 teachers per zone, to give equal selection rights to all strata of the three selected zones. In the same vein, a total of 153 pupils were selected across the three zones at a rate of 51 pupils per zone to give equal representation. Therefore, 3 pupils were selected per school across the 17 selected schools in each zone, repeatedly done across the remaining two zones. Lastly, the study selected a total of 51 parents using a purposive sampling technique to choose a representative of the PTA in each of the selected schools.

5.4 Instruments for Data Collection

The instruments for data collection include a questionnaire, observation checklist, and interview guides. The instrument is tagged "Questionnaire for Nomadic Education Curriculum Implementation of 21st Century Skills of Basic Education (QNECICSBE)," which was developed by the researcher. It is made of five sections with a total of 41 items. The items were designed based on a 5-point Likert rating scale. Thus, the rating scales are: Very High Extent (VHE = 5), High Extent (HE = 4), Moderate Extent (ME = 3), Low Extent (LE = 2), and Very Low Extent (VLE = 1). The QNECICSBE was administered to teachers, head teachers, and supervisors of nomadic schools in Adamawa State.

The observation checklist, tagged "Classroom Observation Checklist for Nomadic Primary School Pupils" (COCNPSP), was developed by the researcher and sectioned into five sections. The COCNPSP comprises 15 items that allow the raters to rate pupils based on different constructs such as listening skills, reading skills, speaking skills, writing skills, and leadership skills. The rating points ranged from 1 to 5 in order of Excellent = 5 points; Very Good = 4 points; Good = 3 points; Weak = 2 points; and Very Weak = 1 point. The COCNPSP was given to research assistants in each school to rate pupils.

The interview guide, tagged "Interview Guide for Nomadic Parents" (IGNP), is sectioned into six sections (A–F) comprising eight items probing parents' understanding and perspective regarding the effectiveness of nomadic curriculum implementation in Adamawa State as noticed on their children.

5.5 Reliability of the Instrument

The reliability of the instrument was determined by pilot testing the questionnaire, observation checklist, and interview guide. A pilot study was very helpful because through it, the researcher ascertained the reliability of the instrument and made improvements where necessary. The instrument was administered to 20 nomadic education teachers, 5 head teachers, 35 pupils, and 9 parents, totaling 69 respondents in Gombe State, which is outside the researcher's study area. The population size of the pilot study is considered adequate for the pilot test based on the suggestion of Teresi, Yu, Stewart, and Hays (2022), who recommends 10% of the sample required for a full study. Teachers, head teachers, supervisors, parents, and pupils were randomly selected from five nomadic schools in Gombe State, which have similar characteristics to those of Adamawa State. The result obtained from the pilot study was analyzed using the Cronbach alpha formula with the help of SPSS version 23, and a reliability coefficient of 0.86 was obtained.

Mathematically, Cronbach's Alpha formula (α) is:

$$\alpha = \frac{k}{k-1} \left\{ 1 - \frac{\sum \sigma_k^2}{\sigma^2} \right\} \quad (2)$$

Where:

- $\sum \sigma_k^2$ is the sum of the variances of the k parts, which are the items of the test or instrument
- σ = standard deviation of the test or instrument

The researcher administered the instrument (questionnaire) personally and retrieved it back after a week for further justification and analysis.

5.6 Method of Data Collection

The researcher visited the sample schools in the educational zones two times. During the first visit, the researcher met with the administrators, school head teachers, parents, and pupils of the nomadic schools in the educational zones and presented a letter

of introduction permitting the researcher to carry out research in the study area. The researcher explained that the purpose of the research is for academic purposes only to clear any doubts. During the visits, the researcher sought a convenient date and time during which he would administer the questionnaire, interview, and observation.

The researcher conducted three days of induction training for the 4 research assistants in each of the three participating educational zones on how to administer the instruments. The researcher and research assistants administered the instruments to the respondents and allowed the respondents to answer the instrument for a period of two days. Also, the researcher and research assistants collaborated with teaching staff to administer the interview guide and observation checklists. Data collection was expected to last for four weeks. The researcher sorted out and tallied the responses for further justification and analysis.

5.7 Method of Data Analysis

The data collected through instruments were analyzed using mean, standard deviation, and bar charts, while regression analysis was used to test the hypothesis at a 0.05 level of significance. The Statistical Package for Social Sciences (SPSS) Version 23 software was used in the analysis.

Decision rule: Any mean between 4.50 and above was considered a very high extent; mean of 3.50 to 4.49 was considered a high extent; mean between 2.50 and 3.49 was considered a moderate extent; mean below 1.50 to 2.49 was considered a low extent; while mean between 0.50 and 1.49 was concluded to be a very low extent. The decision for testing the hypothesis is that any p-value that is less than or equal to the level of significance (0.05), the null hypothesis would be rejected; while if the computed p-value is greater than the level of significance, the null hypothesis would not be rejected.

TABLE 2
NULL HYPOTHESIS TABLE

Variables	Definition of variables	Indicators	Category	Measure
Career life skills	Various career life skills	1. Herd size management skills	Ordinal	5-point Likert Scale
		2. Milk yield management skills		
		3. Daily income generation		
		4. Improvement in livelihood		
		5. Vocational skills		
		6. Livestock management		
		7. Para-veterinary skills		
		8. Animal breeding		
		9. Animal feeding		

Source: Researcher's Work (2022)

Note: Value point < 2.50 is considered Low; Value point > 2.49 < 3.50 is considered Moderate; and Value point > 3.50 is considered High.

VI. RESULTS AND DISCUSSION

6.1 Data Presentation

Descriptive statistics is a summary statistic that quantitatively summarizes features of a collection of information. Thus, the descriptive analysis provides simple summaries of the sample and about the observations that have been made from data collected from the field. Descriptive statistics are different from inferential statistics in that descriptive statistics aim to summarize collected data into meaningful quotients rather than using the data to learn about the population that the sample of data is thought to represent.

6.2 Analysis of Research Question

Research Question 1: To what extent do the agricultural and animal management contents of nomadic education curriculum promote development of career life skills among nomadic pupils in Adamawa State?

Data collected regarding the research question concerning herd size, milk yield, daily income generation, improvement in their livelihoods, vocational skills, livestock management, para-veterinary services, animal breeding, and animal feeding were analyzed using simple percentage and presented in a bar chart in Figure 1 below.

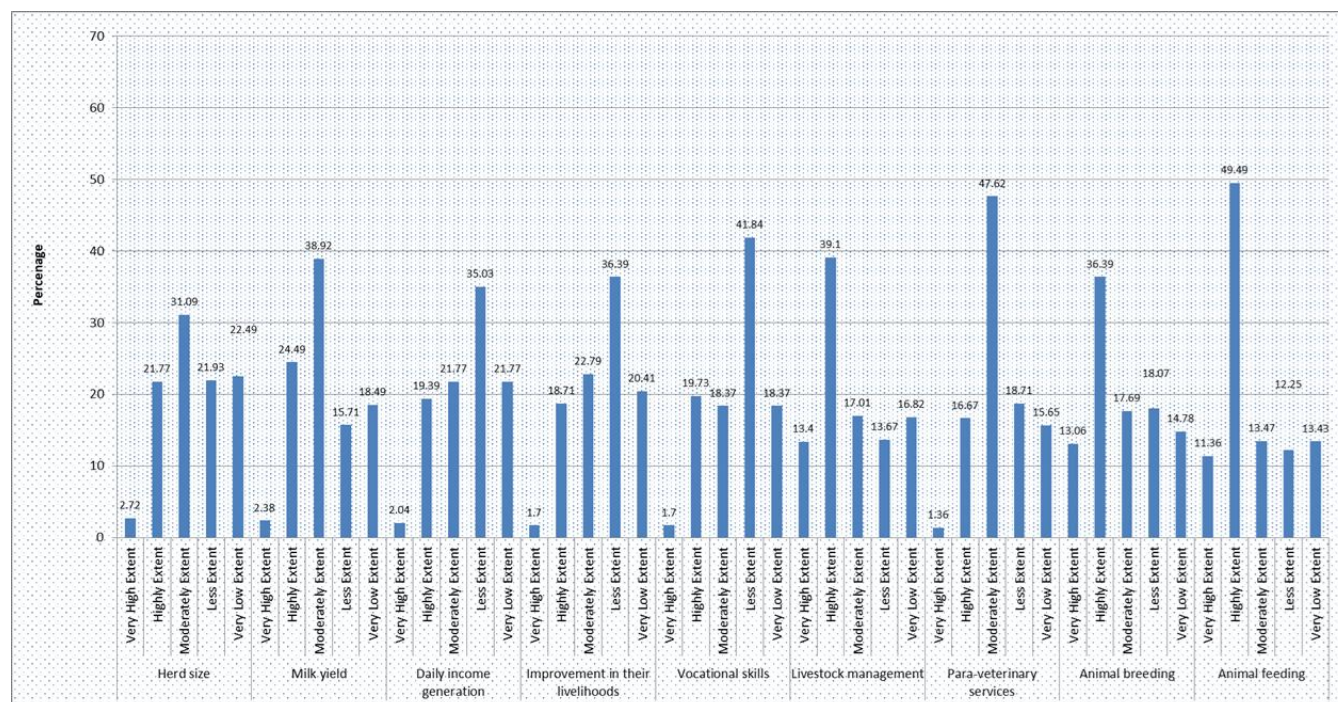


FIGURE 1: Effectiveness of agricultural and animal management curriculum on career life skills development among nomadic pupils in Adamawa State

Note: The figure should show the percentage ratings for each career life skill category based on the survey data.

The results from Figure 1 present the respective ratings of career life skills development among nomadic pupils as a result of implementing the curriculum on agricultural and animal management. The results reveal that rated herd size management skills of nomadic pupils are moderate (31.09%); milk yield skill (38.82%), daily income generation (35.05%), improvement in livelihoods (38.39%), vocational skills (41.34%), livestock management skills (39.10%), para-veterinary services (47.62%), animal breeding skills (34.39%), and animal feeding (49.49%). Overall, the result shows that the pupils improve in skills development for agricultural and animal management.

6.3 Testing of Hypothesis

Hypothesis 1: Agricultural and animal management induces nomadic education curriculum on career life skills in Adamawa State.

TABLE 2a

MODEL SUMMARY FOR REGRESSORS (AGRICULTURAL AND ANIMAL MANAGEMENT CONCEPT AND CAREER LIFE SKILLS)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.387a	0.15	0.145	0.79985

6.3.1 Predictors: (Constant), Agricultural and Animal Management (Rating)

The model summary for the dependent (career life skills) and independent variable (agricultural and animal management concept) was presented in Table 2a. The result reveals an R-value of 0.387, which shows moderate quality of the prediction of the dependent variable (career life skills) based on the independent variable (agricultural and animal management concept). Also, the R-square value of 0.150 and the adjusted R-square values of 0.145 showed that the coefficient of determination is weak, indicating that about 15% of variation in the dependent variable (career life skills) can be explained by the independent variable (agricultural and animal management concept).

TABLE 2b

OUTCOME OF REGRESSION ANALYSIS ON INFLUENCE OF AGRICULTURAL AND ANIMAL MANAGEMENT CONCEPT ON CAREER LIFE SKILLS AMONG NOMADIC PUPILS IN ADAMAWA STATE, NIGERIA

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.009	0.283		14.147	.000
Agricultural and Animal Management (Rating)	0.434	0.081	0.387	5.36	.000

6.3.2 Dependent Variable: Career Life Skills

The results in Table 2b reveal an unstandardized coefficient value of 0.434, Std. Error of 0.081, standardized coefficient value of 0.387, t-value of 5.360, and $p = 0.00 < 0.05$. This shows that the agricultural and animal management concept currently accounts for about 34.1% improvement in career life skills among nomadic pupils, leaving about 65.9% of career life skills yet to be developed.

The results from the tested hypothesis showed that the career life skills among pupils are within a moderate level, with a huge level of development yet to be attained. This could be as a result of the approach mostly used by teachers in formal education settings.

VII. DISCUSSION

7.1 Effectiveness of Agricultural and Animal Management of Nomadic Education Curriculum on Development of Career Life Skills among Pupils in Adamawa State

The findings from this study established that the agricultural and animal management in nomadic education curriculum significantly influences career life skills among nomadic pupils in Adamawa State. Specifically, the results of analysis showed that the implementation of nomadic education curriculum in the aspect of agricultural and animal management has a moderate effect on the herd size management skills among nomadic pupils in the study area.

The finding may be in connection with the fact that the background of most pupils has something to do with cattle rearing and animal husbandry (Bell, 2020). A similar conclusion was drawn by Bolstad et al. (2012) and Onwumere et al. (2016) that failure to link learners' background with classroom activities could deny consistent learning and total commitment among pupils. Thus, teaching knowledge of herd-size management among nomadic pupils could be seen as a good approach since most of these pupils are from families that base their livelihoods on cattle rearing activities. It then becomes paramount for the teachers to ensure that classroom instructions do not contradict learners' background. Carr-Hill et al. (2015) maintained that even if there are dissimilarities between what pupils know and what is to be taught by teachers, teachers may need to start from previous pupil's knowledge and understanding before adding something new or modification with thorough explanation. It could be disastrous if learners were to spot differences between their cultural practices of herd-size management and that of school approach without teachers guiding them through such differences.

The results from this study showed that the implementation of nomadic education curriculum in the aspect of agricultural and animal management has a higher effect on the milk yield management skills among nomadic pupils in the study area. The high level of milk yield management among nomadic pupils could be as a result of the fact that these pupils are from a nomadic background where their father's major occupation has to do with cattle breeding and animal production. Also, most nomadic families engage in what is known as family business, where the father as head of family serves as owner and manager of animal production in collaboration with his sons and young daughters, while his wives and grown-up daughters focus on milk yield management. Bell (2020) expressed that such arrangements engage every member of the nomadic family to the extent that no time is left for them to rest.

VIII. CONCLUSION

This study, through its findings, has established that nomadic pupils are gaining meaningful development through the teaching of agricultural and animal management aspects of nomadic education curriculum. The study showed that nomadic pupils gained significantly in the aspects of herd size management, milk yielding, livestock management skills, para-veterinary skills, and

animal feeding. Though other aspects such as vocational skills, daily income generation, and animal breeding are less developed across studied nomadic schools.

IX. RECOMMENDATIONS

Based on the findings and conclusion from this study, the following recommendations were made toward effective animal management education to encourage nomadic career life skills in Adamawa State, Nigeria:

- 1) **Strengthen Practical-Based Teaching Approaches:** Nomadic teachers in Adamawa State should implement more hands-on and experiential teaching skills in delivering the agricultural and animal management curriculum. Such hands-on activities, including school farming, animal care demonstrations, and role-playing para-veterinary services, will make pupils more engaged and relevant, leading to better acquisition of life skills.
- 2) **Capacity Building for Teachers:** There is a need for the Adamawa State Government to provide regular training and capacity-building workshops for teachers of nomadic education in the state. These trainings should emphasize innovative pedagogical skills, inclusive classroom strategies, and context-specific content delivery to ensure effective implementation of skill-based curricula.
- 3) **Integration of Indigenous Knowledge and Practices:** The curriculum developers should integrate indigenous knowledge and traditional practices in livestock and agricultural management acquainted with nomadic communities. This will expand relevance, enhance skill transfer, and increase pupils' motivation to apply what they learn in their daily lives.
- 4) **Provision of Infrastructural and Material Support:** Government at all levels should provide suitable teaching and learning materials, which include tools for animal care, mini farms, charts, and audiovisual aids. Furthermore, mobile classrooms and flexible learning schedules should be adopted to accommodate nomadic lifestyles and encourage regular school attendance.
- 5) **Continuous Monitoring and Curriculum Review:** A periodic system of monitoring and curriculum review should be established to evaluate the impact of agricultural and animal management education on skill development. Feedback from pupils, teachers, and local communities should inform curriculum updates to ensure responsiveness to learners' needs and community realities.
- 6) **Strengthen Teacher Motivation and Support:** The government should provide adequate incentives and support for nomadic teachers to encourage commitment and reduce turnover in nomadic schools.

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CONFLICT OF INTEREST

The author declares no conflict of interest regarding the publication of this manuscript.

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