

Enhancing Entrepreneurial Skills Acquisition among Agricultural Education Students in Collages of Education in North East Nigeria

**UMAR Abdulmumini¹, ABUBAKAR Mohammed Bapeto², BABANGIDA Hammani³
YUSUF A.A.⁴**

^{1,2,3,4} *Federal College of Education (Technical) Gombe, Nigeria*

Corresponding author: umwakill@gmail.com

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Abstract

This study aims at investigating the strategies for enhancing entrepreneurial skills acquisition among Agricultural Education students in Colleges of Education in North-East Nigeria. Descriptive survey was used for the study. The study was guided by five research questions and null hypothesis. The population of the study comprised of all agricultural education students and their respective lecturers across collages of education that offer Agricultural education program in north east Nigeria with a population size of 1,345 respondents (95 lecturers and 1,250 AES). A sample size of 410 respondents were randomly selected using total population sampling (TPS) and multistage sampling techniques. TPS was used to select the sample of 95 lecturers while multistage sampling techniques was used for the selection of 315 agricultural education students. Questionnaire was used for data collection. Data was analysed using mean and standard deviation for research question 1 to 4 while Z test was used to test the null hypotheses at 0.05 level of significance. The results indicated that, Agricultural education students of colleges of education in North east Nigeria does not acquire the required entrepreneurial skills due to inadequate instructional method used by agricultural education lectures as well as many factors including obsolete equipment, inadequate practical classes, inadequate funding, inadequate equipment, poor industrial linkage, lack of motivation, shortage of qualified instructors and lack of student mentorship. The study recommended the adoption of various strategies for enhancing entrepreneurship skills acquisitions, such strategies include curriculum review, provision of students' industrial linkages among others.

Keyword: Entrepreneurial Skills Acquisition, Agricultural Education Students, Entrepreneurship, Collages of Education

Introduction

Entrepreneurship is the process through which an individual is capable of achieving managerial, practical and technical competencies require for establishing and managing business (Fatima, et al, 2025). According to Umoru and Ifeolu, (2025), entrepreneurial skills enable an individual realizes self-reliant and able to identify investment opportunities in any given environment.

Entrepreneurship skills is an essential component of agricultural education and training program, it equips students with technical knowledge, practical skills and innovation for achieving self-release and sustainable agricultural development (Babatunde, et. al. 2025). It provides employment and play a significant role national development. The need for entrepreneurship education in Nigerian institutions become necessary due to high rate of graduate unemployment (Giami & Emeni, 2025). Agricultural Education (AE) is one of the programs offered by higher educational institutions in Nigeria. The program is supposed to equip the students with practical skills necessary of self-reliance and wealth creation. Unfortunately, many graduates in Nigeria lack the necessary skills and practical knowledge for self-reliance (Mary, 2025). In view of this Federal Government of Nigeria integrated entrepreneurship education in to curriculum of high education institutions across the country. Agricultural education programs in colleges of education are expected to produce graduate with adequate knowledge and technical competencies for establishing profitable agricultural enterprise (Haryanta, et. al. 2025). Agricultural education program exposes students to practical knowledge and competencies in crop production, animal husbandry, Agri processing, fish production, poultry production, agribusiness and marketing. The course subject students of agriculture better knowledge of managing business, innovative, financial competencies and communication skills. Nigeria as a country with favourable climatic condition and natural resources suitable for crop and animal production (Ihugba, 2025). Despite these abundant resources in the country, majority of graduate of agriculture are not utilizing this opportunity due to lack of skills and entrepreneurship competencies. In view of this, the need for enhancing entrepreneurial skills acquisition among students of Agricultural education in collages of education become necessary. This study therefore investigates the various ways of enhancing entrepreneurship skills acquisition among Agricultural Education Students (AES) in Collages of Education in North East Nigeria

Statement of the Problem

Graduate of agricultural education faces a serious difficulty in establishing and managing a successful agribusiness venture (Ahmadvand, & Azizifar, 2025). A significant number of graduates remains unemployed due to inability to acquire necessary skills during the training (Ajo, et. al, 2025). This created a serious doubt on the effectiveness of the curriculum of agriculture across collages of education in Nigeria. In view of this, there is serious need for curriculum review and ensure proper implementation of the curriculum using appropriate teaching pedagogies that will foster entrepreneurial competencies among agricultural education students. There are many factors that are responsible for inadequate entrepreneurial skills acquisitions among agricultural education students. These factors differ from institutions and may affect students' development of critical thinking and entrepreneurial competencies for identifying an investment opportunity in agriculture and decision to plan, establish and manage agribusiness. Furthermore, the current insecurity challenges affecting the northern part of Nigeria where 90 percent of domestic food are produced is attributed to the problem of unemployment, poverty and limited investment opportunities among youth. These necessitate the need of producing graduate with a strong entrepreneurial competency capable of stimulating local production and economic development. Enhancing entrepreneurial skills acquisitions among students of Agricultural education could no

doubt contribute seriously in addressing these challenges through provision of employment opportunities, poverty reduction and maintaining sustainable Agricultural production. There are many studies on entrepreneurship education and employability in Nigeria, no much study on the strategies on enhancing entrepreneurship skills acquisition among graduate of agricultural education of colleges of education especially in North east Nigeria. A knowledge gap therefore exists on various factors affecting entrepreneurial competencies in the context of Agricultural education programs of colleges of education in Nigeria. This study therefore investigates a various way of enhancing entrepreneurial skills acquisitions among agricultural education students of colleges of education in north east Nigeria. The study aims to identify the factors affecting entrepreneurial skills acquisition, determine the adequacy of instructional method and learning resources utilised by agricultural education lecturers for enhancing employability and contribution to agricultural and national development.

Literature Review

Agricultural Entrepreneurship Education

Agricultural entrepreneurship education is the process of providing learners, especially students of agriculture, with skills, knowledge, attitudes and competencies require for creating entrepreneurial mindset for students to recognize agricultural opportunities, create creative business ideas, mobilize resources, manage agricultural enterprises, and add value along agricultural value chains (Joshua, et al. 2025). It blends traditional agricultural knowledge with skills in entrepreneurship, business management, innovation, financial literacy, marketing, opportunity recognition, and risk management (Isiwu & Asogwa 2026). Therefore, agricultural entrepreneurship education goes beyond teaching students how to raise livestock and crops; it also prepares students to see agriculture as a profitable industry that creates jobs. According to Lans, Seuneke, & Klerkx (2013), agricultural entrepreneurship entails individual capacity to identify and seize opportunities while adapting to shifts in agricultural markets and innovation systems. Agricultural education must therefore, foster both technical production competencies and entrepreneurial skills that allow people to turn agricultural knowledge into profitable ventures. The literature also identified an increasing focus on agricultural entrepreneurship. According to Sangerman-Jarquín et al. (2022), a bibliometric analysis of research on agricultural entrepreneurship revealed an increase in scholarly publications on entrepreneurial skills and behaviour, entrepreneurial strategies, and entrepreneurial activities. The scholars also noted that training in agricultural entrepreneurship is becoming more focused on creating business skills that can boost agricultural businesses and increase employment and competitiveness.

Skills Acquisition in Colleges of Education

Skill acquisition is the process by which individuals acquire the practical information, competencies, abilities, and attitudes needed to carry out particular tasks successfully (Lovin & Savu, 2025). In the context of Colleges of Education, acquiring skills entails giving students both professional and pedagogical abilities that can improve their employability, independence, entrepreneurship, and ability to contribute to socioeconomic development. In addition to preparing students for teaching. Colleges of Education are design to prepare students become

useful members of their communities and the larger workforce (Priddis, et al. 2026).

In Nigeria, academic credentials do not guaranty employment and self-realization among young graduate, the emphasis now is on skills development. Colleges of Education are therefore expected to give students necessary vocational and practical skills. Ofuonye (2023) noted that College of Education can help students create jobs through various programmes offered. Skills acquisition in Colleges of Education can take different forms depending on the programme of study. Agricultural Education programme is design to provide skills in crop production, animal husbandry, and agribusiness. The overall objective is to produce graduates who can effectively apply the skills acquired to real-life situations.

Experiential Learning

Experiential learning is an educational approach that allow learners acquire skills, attitudes, knowledge and competencies through direct experience, experimentation, reflection, and application of knowledge to real-life situations. Experiential learning puts students at the centre of the learning process and gives them the chance to learn by doing, as opposed to primarily depending on lectures and theoretical explanations. Kolb (1984) defined experiential learning as the process by which experience is transformed into knowledge. Concrete experience, reflective observation, abstract conceptualization, and active experimentation are the four interconnected stages that make up the paradigm. Experiential learning gives students the chance to make connections between academic ideas and real-world tasks. In the context of agricultural education programme of Colleges of Education, the components of experiential learning include, hands-on demonstrations, industrial training, agricultural practice, laboratory exercises, simulations, project work, agribusiness ventures and teaching practice. In view of this, agricultural education students are expected to develop competencies that can be shown in an actual work situation. The concept of experiential learning is therefore pertinent to vocational, technical, agricultural, and entrepreneurial education. Agricultural education students are urged to participate in an activity, watch and assess the outcomes, connect experiences to knowledge, and then apply the knowledge to new circumstances. Therefore, practical skills, critical thinking, problem-solving aptitude, creativity, confidence, and decision-making abilities can all be developed through experiential learning. Practical competency necessitates opportunities for continuous application and practice among learners. Students may have a theoretical understanding of an idea without necessarily being able to carry out the activity. By enabling students to practice skills in authentic settings, experiential learning helps close this gap. For instance, through hands-on activities, students in agricultural education can develop competences in crop production, animal management, farm machinery operation, agricultural processing, farm business management, and marketing. Through these experiences, students can acquire technical skills and learn how to recognize and address issues that arise in real-world agricultural operations. Experiential learning is crucial for acquiring agricultural skills. In a study conducted by, Alkali and Bako (2025) looked at project and demonstration teaching methods in connection to the development of agricultural skills. The study highlights the value of practical and activity-based techniques assists agricultural education students in gaining abilities that could be challenging to obtain through traditional lecture methods.

Industrial Attachment and Employability in Nigeria

Students in Colleges of education are exposed to professional standards through industrial training. Ebeogu and Ojo (2020) discovered that work-based learning which helped college of education students acquire new skills. Similarly, Ajayi and Akintobi (2025) highlighted the significance of Students Industrial Work Experience (SIWES) in bridging the gap between theoretical understanding and real-world application. Practical experience can also assist agricultural education students become more familiar with agricultural value chains and comprehend the relationships between production, processing, storage, transportation, marketing, finance, and consumption. Agricultural Education graduates may become more adaptive to various career and entrepreneurial prospects as a result of SIWES. In Nigeria, industrial attachment is commonly associated with SIWES, which was established to expose students to practical work situations and reduce the gap between theoretical classroom learning and practical occupational skills. Through industrial attachment, students are expected to develop technical competencies, workplace attitudes, communication skills, teamwork, problem-solving abilities, and familiarity with organizational procedures. By providing students with first-hand exposure to working procedures prior to graduation, industrial attachment can therefore improve employability.

Objectives of the Study

The main objective of the study is to investigate various ways for enhancing entrepreneurial skills acquisition among Agricultural Education students in Colleges of Education in North-East Nigeria. Specifically, the study seeks to determine:

1. the entrepreneurial skills acquired by AES in Colleges of Education in North-East Nigeria.
2. the adequacy of instructional methods used in promoting entrepreneurial skills acquisition among students of Agricultural Education.
3. the factors effecting entrepreneurial skills acquisition among AES in Colleges of Education in North-East Nigeria.
4. the strategies for enhancing entrepreneurial skills acquisition among AES in Colleges of Education in North-East Nigeria.
5. whether there are significant differences in the perceptions of AE lecturers and AES on the strategies for enhancing entrepreneurial skills acquisition among AES in Colleges of Education in North-East Nigeria.

Research Questions

The following research questions were formulated to guide the study:

1. What entrepreneurial skills acquired by AES in Colleges of Education in North-East Nigeria.
2. How adequate are instructional methods used in promoting entrepreneurial skills acquisition among students of Agricultural Education.
3. What are the factors effecting entrepreneurial skills acquisition among AES in Colleges of Education in North-East Nigeria?

4. What strategies can be adopted for enhancing entrepreneurial skills acquisition among AES in Colleges of Education in North-East Nigeria.
5. Are there any significant differences in the perceptions of AE lecturers and AES on the strategies for enhancing entrepreneurial skills acquisition among AES in Colleges of Education in North-East Nigeria?

Research Hypothesis

Ho₁. There is no significant difference in the perceptions of AE lecturers and AES on the strategies for enhancing entrepreneurial skills acquisition among AES in Colleges of Education in North-East Nigeria.

Methodology

Descriptive survey design was adopted for the study, the study was conducted across all collages of education that offer agricultural education program in North east Nigeria. The population of the study comprised of all Agricultural Education Students (AES) and their respective lecturers across colleges of education that offer Agricultural education program in north east Nigeria with a population size of 1,345 respondents (95 lecturers and 1,250 AES). A sample size of 410 respondents were randomly selected using total population sampling (TPS) and multistage sampling techniques. TPS was used to select the sample of 95 lecturers while multistage sampling techniques was used for the selection of 315 AES, the first state involved purposive selection of colleges of educations that offers AE programme in North east Nigeria while the second state requires proportionate random selection of AE students according to the population size of each college.

Table 1: Population and Sample Size of the Respondents

Institutions	Population of AE Lecturers	Sample size of AE Lecturers	Population of AE students	Sample size of AES
FCE Gombe, Gombe State	17	17	202	50
FCE Potiskum, Yobe State	13	13	165	41
FCE Yola, Adamawa State	12	12	168	41
COE Gashua, Yobe state	11	11	86	22
COE Azare, Bauchi State	10	10	195	51
COE Hong, Adamawa State	11	11	160	41
COE Waka Biu, Borno State	10	10	194	50
COE Bama, Borno State	11	11	80	19
TOTAL	95	95	1250	315

Source: Field Survey, 2026

Structured questionnaire was used as an instrument for data collection, the design of the questionnaire was closed ended which restrict the respondent to certain option (SA = Strongly agree, A = Agree, D = Disagree, SA = Strongly Agree). The questionnaire consists of 40 items made up of part 1, 2, 3, and 4 which was designed in accordance with relevant research questions. The questionnaire was subjected to validity and reliability test, three experts in the area of agricultural education were used for face validity while reliability co efficient of 0.83 Alpha value was determined. Split half method of determining reliability was adopted. The instrument was administered to the respondent and analysed using mean and standard deviation for research question 1 to 4 while T- test was used to test the null hypotheses at 0.05 level of significance. Decision rule for the mean value was 2.50 and for the hypotheses p- value of 0.05 was used (p-value less than or equal to 0.05 the null hypotheses was rejected and a p-value greater than 0.05 was accepted).

Results

Table 2; Entrepreneurial skills acquired by AES (n= 410).

S/N	Items	Mean	SD	Remark
1	Crop production skills	2.59	0.58	Agree
2	Animal husbandry management skills	2.38	0.79	Disagree
3	Poultry production skills	2.89	0.43	Agree
4	Fish production skills	1.58	0.82	Disagree
5	Agribusiness skills	2.00	0.64	Disagree
6	Agricultural marketing skills	2.48	0.59	Disagree
7	Skills of agricultural finance	1.93	0.71	Disagree
8	Skills of agricultural processing	3.00	0.50	Agree
9	Skills of grading agricultural produce	2.48	0.60	Disagree
10	Value addition skills	1.39	0.98	Disagree
	Grand mean	2.27	0.66	Disagree

Table 2 reveals the type of entrepreneurial skills acquired by AES of colleges of education in North east Nigeria, the table indicated that, AES acquires entrepreneurial skills only in agricultural processing (mean score of 3.00), poultry production (mean score of 2.89) and crop production (mean score of 2.59). The table also reveals that, AES does not acquire entrepreneurial skills in agricultural marketing (mean score of 2.48), grading agricultural produce (mean score of 2.48), animal husbandry (mean score of 2.38), agribusiness (mean score of 2.00), agricultural finance (mean score of 1.93), fish production (mean score of 1.58) and value addition (mean score of 1.39). Table 2 with a grad mean of 2.27 conclude that AES of colleges of education in North east Nigeria does not acquire required entrepreneurial skills.

Table 3; Adequacy of instructional methods used in promoting entrepreneurial skills acquisition (n= 410).

S/N	Items	Mean	SD	Remark
1	Classroom lecture	3.59	0.38	Agree
2	Practical demonstration	2.43	0.19	Disagree
3	Filed trip/Excursion	1.83	0.53	Disagree
4	Project based learning	1.05	0.85	Disagree
5	Business stimulation	1.94	0.74	Disagree
6	Industrial work experience	2.50	0.39	Agree
7	Mentorship	1.05	0.63	Disagree
8	Farm lecture	1.38	0.82	Disagree
9	Entrepreneurship oriented learning	2.00	0.45	Disagree
10	Innovative and program design	1.43	0.78	Disagree
	Grand mean	1.92	0.58	Disagree

Table 3 reveals the adequacy of instructional method in promoting entrepreneurial skills acquisition for AES. The table indicated that, lecturers only used classroom lectures (mean score of 3.59) and industrial work experience (mean score of 2.50) in promoting entrepreneurial skills acquisitions among AES, they do not used practical demonstration (mean score of 2.43), entrepreneurship oriented learning (mean score of 2.00), business stimulation (mean score of 1.94), field trip/excursion (mean score of 1.83), innovative and program design (mean score of 1.43), farm lecture (mean score of 1.38), mentorship (mean score of 1.05) and project based learning (mean score of 1.05) in teaching entrepreneurship skill acquisition for AES in colleges of education of north east Nigeria. Table 3 with a grand mean of 1.92 indicated that, instructional method used by lectures in promoting entrepreneurship skills acquisitions for AES is not adequate.

Table 4; Factors affecting entrepreneurial skills acquisition among AES (n= 410).

S/N	Items	Mean	SD	Remark
1	Inadequate funding	3.60	0.34	Agree
2	Inadequate practical class	3.84	0.28	Agree
3	Inadequate equipment	3.50	0.49	Agree
4	Obsolete equipment	3.86	0.18	Agree
5	Poor industrial Linkages	3.46	0.56	Agree
6	Shortage of qualified instructors	2.71	0.73	Agree
7	Poor institutional support	1.89	0.92	Disagree
8	Lack of student mentorship	2.63	0.84	Agree
9	Large class size	1.38	0.95	Disagree
10	Lack of motivation	2.89	0.64	Agree
	Grand mean	2.92		Agree

Table 4 reveals the factors affecting entrepreneurial skills acquisition among AES, the table indicated that, obsolete equipment (mean score of 3.86) inadequate practical classes (mean score of 3.84), inadequate funding (mean score of 3.60), inadequate equipment (mean score of 3.50), poor industrial linkage (mean score of 3.46), lack of motivation (mean score of 2.89), shortage of qualified instructors (mean score of 2.71), lack of students mentorship (mean score of 2.63) affect AES entrepreneurship skills acquisitions in collages of educations in North east Nigeria. Table 3

also indicated that, poor institutional support (mean score of 1.89) and large class size (mean score of 1.38) does not affect entrepreneurship skills acquisitions among AES of colleges of education in North east Nigeria Table 4 with a grand mean of 2.92 indicated that, there are many factors affecting entrepreneurship skills acquisition among AES of colleges of educations in North east Nigeria.

Table 5; Strategies for enhancing entrepreneurial skills acquisition among AES (n= 410).

S/N	Items	Mean	SD	Remark
1	Curriculum review	3.45	0.18	Agree
2	Staff training and development	3.28	0.24	Agree
3	Increased funding	3.21	0.38	Agree
4	Increased in supervision	3.09	0.49	Agree
5	Provision of students' industrial linkages	3.36	0.27	Agree
6	Student follow up studies	2.58	0.58	Agree
7	Industrial collaboration	3.29	0.26	Agree
8	Innovation incubation centre	2.98	0.42	Agree
9	Increase lecturers' evaluation	2.56	0.51	Agree
10	Ready market for student production	3.34	0.20	Agree
	Grand mean	3.11	0.35	Agree

Table 5 reveals the strategies for enhancing entrepreneurial skills acquisitions among AES in collages of educations in North east Nigeria include curriculum review (mean score of 3.45), provision of students' industrial linkages (mean score of 3.36), provision of ready market for students production (mean score of 3.34), industrial collaborations (mean score of 3.29), staff training and development (mean score of 3.28), increase funding (mean score of 3.21), increase supervision (mean score of 3.09), provision of innovation incubation centre (mean score of 2.98), students follow up studies (mean score of 2.58) and increase lecturers' evaluation (mean score of 2.56). Table 5 with a grand mean of 3.11 indicated that there is need of adopting those strategies for enhancing entrepreneurship skills acquisitions among AES of collages of educations in North east Nigeria.

Hypothesis Test

H₀₁: There is no significant difference between the perceptions of lecturers and students regarding the strategies for enhancing entrepreneurial skills acquisition among Agricultural Education students in Colleges of Education in North-East Nigeria. Table 6; t- test table for difference between mean rating of AES and Lectures on strategies for enhancing entrepreneurial skills acquisitions

Items	Sample (n)	Mean	SD	t-cal.	df	Sig.(2-tail)	Decision
Lecturers	95	3.75	0.52				NS
AES	315	3.81	0.41	0.99	408	0.34	

NS = Not significance.

Table 6 with a significance value of 0.34 which is greater than 0.05 level of significance indicated that, there is no significance difference between mean rating of lecturers and AES on the strategies for enhancing entrepreneurial skills acquisitions among AES of colleges of education in North east Nigeria. The null hypothesis is therefore accepted, this means that both lecturers and AES are on the same opinion on the strategies for improving entrepreneurship skills acquisitions for AES of colleges of education in north east Nigeria.

Conclusion

The study concludes that AES of colleges of education in North east Nigeria does not acquire the required entrepreneurial skills due to inadequate instructional method used by agricultural education lectures in promoting entrepreneurship skills acquisitions and many factors including obsolete equipment, inadequate practical classes, inadequate funding, inadequate equipment, poor industrial linkage, lack of motivation, shortage of qualified instructors and lack of student mentorship. The study called for adoption of various strategies for enhancing entrepreneurship skills acquisitions, such strategies include curriculum review, provision of students' industrial linkages, provision of ready market for student production, industrial collaborations, staff training and development, increase funding, increase supervision, provision of innovation incubation center, students follow up studies and increase lecturers' evaluation. The study also indicates no significance difference between mean rating of lecturers and AES on the strategies for enhancing entrepreneurial skills acquisitions among AES of colleges of education in North east Nigeria.

Recommendations

The following recommendations were made based on the findings of the study

1. The curriculum of agricultural education programs in Nigerian colleges of education in Nigeria should be redesign to integrate practical and hand on training that will address the current challenges of unemployment and entrepreneurial skills acquisitions.
2. Adequate funding of agricultural education program should be provided for the procurement of modern equipment, establishment of practical demonstration farm, laboratories and agribusiness incubation centres.
3. All agricultural education lecturers should adopt the use of learner - centres and experiential teaching method. Strict supervision of those method should be enforce by relevant authority.
4. Strong industrial partnership with agro - allied industries, research institutions and entrepreneurship development centre should be provided with strong student supervision and mentorship.
5. AES should be encouraged by their respective lectures and mentors to participate in farm enterprises, agribusiness, development of business plan, agricultural exhibitions and cooperative involvement

6. Strong monitoring and evaluation of agricultural education and entrepreneurship development program should be ensured by National commission of education (NCCE) to ensure sustainability and compliance with prescribed standards.

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