Journal of Theoretical and Empirical Studies in Education
Vol. 10 Issue 2 May, 2025

IMPLEMENTATION OF AGRICULTURAL EDUCATION PROGRAMME IN AFRICAN UNIVERSITIES

Deborah Ogbene Onu,
Department of Agricultural Education, University of Agriculture, Makurdi Nigeria.
+2347039586417, debbieonu2@gmail.com

Irimiah Abeya Ezhim,
Department of Agricultural Education, University of Nigeria, Nsukka,
+2347030843351 abeya.ezhim.pg80189@unn.edu.ng

Vincent Chidindu Asogwa,
Department of Agricultural Education and Extension, University of Eswatini,
+26876802179, asovinchidi@gmail.com

Mpendulo Mathenjwa,
Department of Agricultural Education and Extension, Faculty of Agriculture,
University of Eswatini,

Ikechukwu John Onyendi,
Department of Agricultural Education and Home Science Education,
Michael Okpara University of Agriculture, Umudike., iyke.onyedi@yahoo.com,

Gideon Monday Nwabueze,
Department of Agricultural Education and Home Science Education,
Michael Okpara University of Agriculture, Umudike.
gideonnwabuezemonday@gmail.com

Abstract

In recent times, the implementation of agricultural education has left much to be desired in most African universities. This study investigated the implementation of agricultural education programmes in African universities. Four objectives, three research questions, and three hypotheses guided the study. A pragmatic mixed-methods approach with a descriptive design was used. The sample included 115 agricultural education lecturers. Two researcher-developed instruments' the African Agricultural Education Programme Implementation Questionnaire (AAEPIQ) and Interview Guide (AAEPIIG)—were validated by five experts. Reliability indices were .93 (AAEPIQ) and .89 (AAEPIIG) using Cronbach's alpha and Cohen's Kappa. Data was collected via email, with an 85.92% return rate. Findings revealed gender imbalance, limited assessment and research skills among lecturers, and insufficient staffing due to lack of replacements. Nonetheless, there are high prospects for effective programme implementation. The study recommends that

governments and relevant agencies in African countries develop strategies to strengthen agricultural education in universities.

Keywords: Agricultural, Education Programme, Implementation, African universities,

Introduction

Agricultural education is offered at undergraduate and postgraduate levels in African universities under various names, including Agricultural Science Education and Agricultural Education and Extension. Despite semantic differences, these programs aim to develop human and capital resources in education and agriculture. They equip graduates with technical, entrepreneurial, and research skills for self-employment, education, and national development. The programs also prepare students for managing educational institutions and agricultural enterprises, fostering career appreciation, enhancing technical competencies, and improving vocational and research skills. Given the global push for Sustainable Development Goals (SDGs), implementing a more pragmatic agricultural education program is crucial for poverty eradication, food security, and economic growth. Agricultural education, being vocational, necessitates hands-on teaching methods to develop competent professionals in farming, teaching, and extension services.

However, various challenges hinder its implementation, including misconceptions, inadequate funding, poor instructional methods, lack of practical experience, negative societal attitudes, weak policies, and outdated curricula. Additionally, limited institutional linkages and neglect of emerging agricultural issues further constrain effectiveness. To address these challenges, the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) was established in 2004. This network of 128 universities in 38 African countries integrates universities into national agricultural innovation systems, enhances graduate training, optimizes resources, and promotes networking and advocacy for higher agricultural education.

Conceptual Framework

Programme implementation in education involves translating policies and research-based initiatives into practical applications that impact learners and institutions. It is a structured process aimed at ensuring that educational programmes achieve their intended outcomes. According to Rabin and Brownson (2018), implementation is not merely about launching a programme but also about sustaining its effectiveness over time.

Several implementation models provide structured approaches to this process. Hateley-Browne *et al*. (2019) outline four stages: engage and explore, where needs assessment and stakeholder engagement occur; plan and prepare, which involves developing implementation strategies; initiate and refine, where the programme is launched and adjusted based on feedback; and sustain and scale, which ensures long-term success.

Challenges of Programme Implementation

Despite the structured approaches available, agricultural education programme implementation faces numerous challenges. Many authors, including Osarenren-Osaghae and Irabor (2018), Ahmadi and Lukman (2015), Olorunleke (2014), identified different challenges associated with programme implementation. The authors identified the following as the general challenges associated with programme implementation: inadequate funding; lack of information and communication technology (ICT) resources; consistent power failure; low internet connectivity; and inadequate use of audiovisual materials and equipment. The authors also identified other challenges as improper and ineffective administration, planning, and accountability; unplanned activities; poor teacher preparatory programmes; improper supervision and monitoring of programmes; inadequate teaching and learning facilities; lack of government commitment; inadequately qualified staff; non-involvement of teachers in decision-making during curriculum

planning; and lack of teacher motivation. Amadioha (2014) summarised those challenges into: poor financial planning; political problems; perceptual problems; and professional problems. In another view, Viennet and Pont (2017) pointed out some of the challenges of programme implementation, including coordination issues, inadequacy of organisational resources, actors' capacity, or reactions against reforms. Moreover, as the education sector has become more complex, the challenges of putting change into practise have also evolved. Viennet and Pont (2017) highlighted others, including the lack of focus on the implementation processes when defining policies at the system level, the lack of recognition that these change processes require engaging people at the core, and the need to revise implementation frameworks to adapt to new complex governance systems.

Prospects of Agricultural Education Programme Implementation

Despite challenges, agricultural education programmes offer significant opportunities. Well-structured initiatives enhance educational stability, governance, and sustainability (Igbokwe, 2016). These programmes contribute to economic development by equipping learners with agribusiness skills, increasing employability, fostering self-employment, and reducing poverty. As a major employer in Africa, agriculture benefits from well-trained graduates who drive innovation and productivity.

Effective agricultural education ensures food security and sustainable farming. Training in eco-friendly techniques enables students to implement sustainable practices, enhancing food production and environmental conservation (Osuafor, 2012). Given the rising demand for sustainable agriculture, integrating environmental awareness into curricula benefits farmers and the economy. To maximize these gains, curricula must be relevant, adaptable, and aligned with workforce and technological advancements.

Strategies for Enhancing Agricultural Education Implementation

Several strategies can improve programme implementation. Strengthening research and curriculum development is essential, ensuring alignment with industry needs (Gouëdard *et al*., 2020). Institutions should adopt flexible curricula adaptable to evolving technologies and practices. Enhancing teaching methods by shifting from teacher-centered to student-centered learning improves engagement and knowledge retention (Cremers *et al*., 2014). Integrating digital tools like e-learning, virtual reality, and multimedia enhances accessibility and effectiveness (Lin, 2017). Hands-on experiential learning should also be prioritized. Institutional and stakeholder collaboration ensures programme sustainability. Partnerships between universities and the private sector secure funding, provide internships, and align training with market demands. Policymaker engagement is crucial for regulatory improvements and creating an enabling environment. Addressing socioeconomic and policy barriers through increased government funding, improved infrastructure, and policy consistency is vital. Promoting gender inclusion and entrepreneurship development expands opportunities for women and youth. Strengthening institutional capacity through leadership training enhances governance and implementation efficiency.

A collective effort from governments, educators, and industry stakeholders is required to ensure agricultural education contributes to national and regional development. With the right strategies, these programmes can drive sustainable agriculture and economic empowerment across Africa.

Theoretical Framework: Diffusion of Innovation Theory

The Diffusion of Innovations Theory (Rogers, 1962) explains the adoption and spread of new ideas within a social system. It highlights factors influencing the implementation of agricultural education strategies in African universities. Lecturers as innovators or early adopters provide insights into engaging faculty and fostering

innovation. Understanding these factors helps policymakers design effective professional development programs. Implementing technology-enhanced teaching methods can improve educational outcomes, preparing students for the evolving agricultural industry.

Statement of the Problem

Despite its benefits, agricultural education remains under-implemented in African universities. These programmes prepare students for roles in education, agribusiness, and public service. Unfortunately, some African universities, such as the University of Limpopo, the University of Tanzania, and the University of Lesotho, have discontinued agricultural education (RUFORUM, 2020). The reasons for this trend require empirical investigation. Without action, achieving the goals of agricultural education in Africa remains uncertain. The Minimum Standard for NCE Teachers (2008) emphasizes the importance of agricultural education in equipping youth with agricultural knowledge and training personnel for extension services. However, there is limited empirical evidence on programme implementation in African universities. This study seeks to bridge that gap by assessing the level of implementation and its impact.

Specific Objectives and Research Questions

The study's objectives and research questions were all distinctive in order to achieve the research purpose.

Table 1: Mapping of Research Objectives and Questions

S/N	Specific Objectives	Research Questions
1	To investigate the challenges of implementing agricultural education in African universities.	What are the challenges of implementing agricultural education in African universities?
2	To examine the prospects of agricultural education in African universities.	What are the prospects of agricultural education in African universities?
3	To identify strategies to enhance the implementation of agricultural education in African universities?	What are the strategies to enhance the implementation of agricultural education in African universities?

Hypotheses

The following hypotheses were formulated and tested at the 0.05 level of significance.

$H0_1$: There is no significant difference between the mean responses of lecturers of agricultural education from the five African regions on the challenges of implementing agricultural education in African universities.

$H0_2$: There is no significant difference between the mean responses of lecturers of agricultural education from the five African regions on the prospects of agricultural education in African universities.

$H0_3$: There is no significant difference between the mean responses of lecturers of agricultural education from the five African regions on the strategies to enhance the implementation of agricultural education in African universities.

Methodology

The study was conducted in Africa, which is the second-largest continent in the world after Asia. The Atlantic Ocean borders it on the west, the Mediterranean Sea on the north, the Red Sea and the Indian Ocean on the east, and the seas that combine the Atlantic and Indian Oceans on the south. It makes up nearly one-fifth of all the land on Earth. The total land mass is approximately 11,724,000 square miles (30,365,000 square km), and the continent measures about 5,000 miles (8,000 km) from north to south and about 4,600 miles (7,400 km) from east to west (Britannica Encyclopaedia, 2020). Africa has 5 regions with 55 countries, namely North (7 countries), West (15 countries), Central (9 countries), East (14 countries), and Southern (10 countries) (Sahel and West African Club, 2017). Africa lies within the tropics at equal range to the north and south of the equator, which gives it close variations in temperature, rainfall patterns, vegetation, agricultural activities, and economic activities.

Table 1: Population and sample distributions

African Region	Target Population	Sampled (AAEPIQ)	AAEPIIG
North	11	5	
West	93	85	4
Central	21	15	2
East	0	0	0
Southern	17	10	1
Total	**142**	**115**	**7**

The study targeted 142 agricultural education lecturers across African universities using a census sampling method. A pragmatic sequential mixed-method design was employed, using both quantitative (AAEPIQ) and qualitative (AAEPIIG) instruments developed from literature. Instruments were validated by five experts and trial-tested on 20 lecturers. AAEPIQ showed a Cronbach's alpha of .93 and AAEPIIG had a Cohen's Kappa of .67 (Kohen cited in Nworgu, 2018). Data collection, assisted by trained lecturers, achieved an 85.92% response rate (Lindemann, 2019). Analysis used descriptive and inferential statistics.

Ethical approvals were obtained, and participation was voluntary, confidential, and allowed withdrawal at any stage.

Results

The results of the study on the research questions answered and hypotheses tested are presented as follows:

Table 1: Mean and standard of the responses of the respondents on the challenges of implementing agricultural education in African universities

S/N	Item Statement	$\overline{X}$	σ	
1	Inadequate funding of agricultural education programmes in universities	4.61	.57	Agreed
2	Improper monitoring and supervision of agricultural education programmes	4.30	.86	Agreed
3	Inadequate instructional facilities for agricultural education programmes in the universities	4.65	.96	Agreed
4	Non-involvement of agricultural education lecturers in decision-making	4.04	1.00	Agreed
5	Non-involvement of agricultural education lecturers in the curriculum planning process	3.70	1.08	Agreed
6	Lack of focus on agricultural education implementation processes when defining the programme at the system level	4.30	.80	Agreed
7	Lack of motivation among agricultural education stakeholders	3.78	.93	Agreed

8	Difficulty in adapting agricultural education implementation frameworks to the complex university administration systems	3.69	.95	Agreed
9	Increasing complexity of agricultural education programmes at the planning level	3.78	.88	Agreed
10	Difficulty in attaining the programme objectives in the present time	3.83	.96	Agreed
11	Waning interest among stakeholders in the programme	3.26	1.15	Agreed
12	Abrupt changes in agricultural education programme leadership	4.43	.49	Agreed
13	inadequately qualified staff for the programme	4.13	1.19	Agreed
14	Failure of the programme to live up to the expectations of some of the stakeholders	4.26	.99	Agreed
15	Lack of information and communication technology (ICT) equipment for agricultural education programmes	3.78	.88	Agreed
16	Wrong notion and attitude towards the philosophy and efficacy of the agricultural education programme	3.23	1.21	Agreed
17	Lack of globalisation initiative in the agricultural education programme among universities	4.43	.77	Agreed
18	Lack of effective collaboration of the agricultural education department with other allied agriculture and agri-based programmes in and outside universities	4.48	.58	Agreed

Number of respondents = 115, $\overline{X}$ = mean of the respondents, σ = standard deviation of the total sampled population

Table 1 reveals that all 18 items had mean values that ranged from 3.23 to 4.65 and were above the cut-off point of 2.50 on a four-point scale. This implies that the respondents agreed that all 18 items are challenges to implementing agricultural education in African universities. The standard deviation of all 18 items ranged from .49 to 1.21, indicating that the respondents were not far from the mean in their responses.

Table 2: Mean and standard of the responses of the respondents on the prospects of implementing agricultural education in African universities

S/N	Item Statement	$\overline{X}$	Σ	Decision
1	Implementation of the agricultural education programme guarantees quality decisions among agricultural education stakeholders.	4.57	.49	Agreed
2	Implementation of an agricultural education programme would promote educational stability.	4.17	1.01	Agreed
3	Implementation of the agricultural education programme ensures a sense of direction among agricultural education stakeholders.	3.87	.85	Agreed
4	Implementation of the agricultural education programme ensures orderliness of action among the stakeholders.	4.61	.49	Agreed
5	Implementation of the agricultural education programmeme would reduce excessive costs for the programmes.	4.65	.47	Agreed
6	A well-implemented agricultural education programme gives stakeholders a sense of responsibility.	4.43	.77	Agreed
7	Implementation of the agricultural education programme will enable the youths to develop creative skills for survival with the assurance of job creation.			

		4.30	.80	Agreed
8	There are many universities offering agricultural programmes that could integrate agriculture education programmes for development.	4.00	1.03	Agreed
9	There are many universities offering education programmes that could integrate agriculture education programmes for development.	4.39	.87	Agreed
10	There is a lack of human resources in agriculture education programmes for expansion and sustainability in Africa.	4.30	.86	Agreed

Number of respondents = 115, = mean of the respondents, σ = standard deviation of the total sampled population.

Table 2 shows that all 10 items had mean values that ranged from 3.87 to 4.65 and were above the cut-off point of 2.50 on a five-point scale. This implies that the respondents agreed that all 10 items are about the prospects of agricultural education in African universities. The standard deviation of all 10 items ranged from.47 to 1.03, indicating that the respondents were not far from the mean in their responses.

Table 3: Mean and standard of the responses of the respondents on strategies to enhance effective implementation of agricultural education in African universities

S/N	Item Statement	$\overline{X}$	Σ	Decision
1	Revitalising agricultural education curricula to be more responsive to the changing contextual needs of diverse stakeholders	4.61	.49	Agreed
2	Adapting the Agricultural Education Programme to bridge the gap between abstract theories on education, learning, and universal knowledge	4.48	.58	Agreed
3	Developing agricultural education curriculum through interactive processes to allow deliberations, reflections, and learning among stakeholders	4.57	.49	Agreed
4	Shortening the curricula review cycle to less than five years to meet the increasing pace of change in the skills needed by graduates	3.43	1.31	Agreed
5	Collaboration of the Agricultural Education Department with other professional academies and personnel for self-employment or imparting skills that enhance employability to students	4.22	.93	Agreed
6	Collaborating with various departments of agricultural industries by offering training in extension and leadership in agriculture to alleviate problems of funding	4.65	.47	Agreed
7	Designing more relevant tests for measuring procedural information and the soft skill development of students	4.35	.56	Agreed
8	Introduction of learning innovations that create environments for students to discover and construct knowledge for themselves	4.43	.65	Agreed
9	Departments embracing technological innovation for instructional design and content to facilitate learning	4.35	.76	Agreed
10	Provision of support for the social and emotional well-being of the students and other stakeholders to captivate and sustain their interest in the programme	4.48	.71	Agreed

11	Integrating contemporary issues such as leadership, communication, entrepreneurship, gender and youth, agribusiness, systems thinking, population growth, and HIV/AIDS into the curriculum of agricultural education	4.35	.81	Agreed
12	Establishing high cohesion with peer institutions and stakeholders for the globalisation of the programme	4.34	.70	Agreed
13	The department is tracking the agricultural education graduates for programme evaluation and improvement.	4.52	.65	Agreed

Number of respondents = 115, $\overline{X}$ = mean of the respondents, σ = standard deviation of the total sampled population

Table 3 shows that all 13 items had mean values that ranged from 3.43 to 4.65 and were above the cut-off point of 2.50 on a five-point scale. This implies that the respondents agreed that all 13 items are strategies to enhance the effective implementation of agricultural education in African universities. The standard deviation of all 13 items ranged from.47 to 1.31, indicating that the respondents were not far from the mean in their responses.

Table 4: Analysis of Variance (ANOVA) Statistics on the Mean Ratings of Respondents on the Challenges of Implementing Agricultural Education in African Universities Based on Location or Region

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3718.156	3	1239.385	85.953	.000
Within Groups	1600.539	111	14.419		
Total	5318.696	114			

Table 4 presents an ANOVA of the mean ratings of respondents on the prospects of agricultural education in African universities based on location at p.05. The table shows a p-value of.00, which is less than the alpha value of.05-level of significance at 3 and 111 degrees of freedom (between groups and within groups, respectively). This indicates that there is a significant difference in the mean rating of respondents on the prospects of agricultural education in African universities; hence, the null hypothesis was rejected. In order to ascertain the direction of the difference, the data was further subjected to Duncan's test. The result is presented in Table 5.

Table 5: ***Duncan's test result of the difference in respondents' responses on the challenges of agricultural education in African universities based on location or region***

Region	N	Subset for alpha = 0.05			
		1	2	3	4
Southern	10	28.5000			
Central	15		36.6667		
West	85			46.0588	
North	5				50.0000
Sig.		1.000	1.000	1.000	1.000

Data in Table 5 reveals that respondents (lecturers) in Southern Africa were in sub-set 1, Central in sub-set 3, West in sub-set 3, and North in sub-set 4, all with a significant level of 1.000. The significant level of each group was greater than.05. This portrays that there was no significant difference in the mean rating of lecturers in each of the subsets, but when combined, a significant level exists in their responses. It therefore means that the significance is based on the region or location of the respondents.

Table 6: Analysis of Variance (ANOVA) Statistics on the Mean Ratings of Respondents on the prospects of Implementing Agricultural Education in African Universities Based on Location or Region

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3718.156	3	1239.385	85.953	.000
Within Groups	1600.539	111	14.419		
Total	5318.696	114			

Table 6 presents an ANOVA of the mean ratings of respondents on the prospects of agricultural education in African universities based on location at p.05. The table shows a p-value of.00, which is less than the alpha value of.05-level of significance at 3 and 111 degrees of freedom (between groups and within groups, respectively). This indicates that there is a significant difference in the mean rating of respondents on the prospects of agricultural education in African universities; hence, the null hypothesis was rejected. In order to ascertain the direction of the

difference, the data was further subjected to Duncan's test. The result is presented in Table 7.

Table 7: Duncan's test result of the difference in respondents' responses on the prospects of agricultural education in African universities based on location or region

Region

Region	N	Subset for alpha = 0.05			
		1	2	3	4
Southern	10	28.5000			
Central	15		36.6667		
West	85			46.0588	
North	5				50.0000
Sig.		1.000	1.000	1.000	1.000

Data in Table 7 reveals that respondents (lecturers) in Southern Africa were in sub-set 1, Central in sub-set 3, West in sub-set 3, and North in sub-set 4, all with a significant level of 1.000. The significant level of each group was greater than.05. This portrays that there was no significant difference in the mean rating of lecturers in each of the subsets, but when combined, a significant level exists in their responses. It therefore means that the significance is based on the region or location of the respondents.

Table 8: Analysis Variance (ANOVA) Statistics on the Mean Ratings of Respondents on the Strategies to Enhance Effective Implementation of Agricultural Education in African Universities Based on Location or Region

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5467.280	3	1822.427	66.303	.000
Within Groups	3050.980	111	27.486		
Total	8518.261	114			

Table 8 presents an ANOVA of the mean ratings of respondents on the strategies to enhance effective implementation of agricultural education in African universities based on location at p.05. The table shows a p-value of.00, which is less

than the alpha value of.05 level of significance at 3 and 111 degrees of freedom (between groups and within groups, respectively). This indicates that there is a significant difference in the mean rating of respondents on the strategies to enhance effective implementation of agricultural education in African universities; hence, the null hypothesis was rejected. In order to ascertain the direction of the difference, the data was further subjected to Duncans test. The result is presented in Table 7.

Table 9: ***Duncan's test result of the difference in respondents' responses on the strategies of agricultural education in African universities based on location or region***

Region	N	Subset for alpha = 0.05			
		1	2	3	4
Southern	10	39.0000			
Central	15		47.6667		
West	85			59.7059	
North	5				65.0000
Sig.		1.000	1.000	1.000	1.000

Data in Table 9 reveals that respondents (lecturers) in Southern Africa were in sub-set 1, Central in sub-set 3, West in sub-set 3, and North in sub-set 4, all with a significant level of 1.000. The significant level of each group was greater than.05. This portrays that there was no significant difference in the mean rating of lecturers in each of the subsets, but when combined, a significant level exists in their responses. It therefore means that the significance is based on the region or location of the respondents.

Discussion of Results

Findings in Table 1 reveal multiple challenges hindering effective implementation of agricultural education programmes in African universities. This aligns with Baridoma and Nlebem (2019), Emmanuel *et al*. (2014), and Olusoga (2014), who noted that institutions and stakeholders often misconceive the essence of agricultural education, leading to inadequate funding, limited resources, and insufficient practical experiences to engage students. Ibrahim (2014) similarly observed poor integration of classroom, school farm, and lab instruction, low learner

and parental interest, poor teacher motivation, weak instructional methods, unstable policies, technological and environmental changes, and lack of basic amenities.

Table 2 highlights agricultural education's potential to boost food production, support income diversification, and generate agro-related employment. These findings concur with Ibrahim (2014), who noted Nigeria's Agricultural Education Programme is undergoing transformation with promising impacts for rural farmers, who produce up to 95% of domestically marketed food and 2.4% of export food. Ademu *et al*. (2018) emphasized that agricultural education equips students with entrepreneurial skills, fosters creativity, expands economic opportunities, and supports individual freedom. Patil (2012) also stressed that national progress depends on cultivating job creators through productive education, a global tenet of agricultural education.

According to Table 3, findings align with Ndem (2016), who identified strategies such as teacher incentives, continuous training, and appropriate teaching methods to improve agricultural science programmes in Nigeria's Afikpo Educational Zone. Ingram *et al*. (2018) stressed the importance of addressing teacher shortages to meet modern agricultural workforce needs. The study further supports RUFORUM's objectives to enhance higher education quality and PhD-level academic staff capacity in Africa.

The Duncan's test on respondents' views regarding the challenges and prospects of implementing agricultural education in African universities revealed a significant difference in opinions, influenced by the universities' locations and regions. This variation may be attributed to lecturers' training backgrounds and socio-economic and political factors that shape the nature and content of training programmes. However, contrary to expectations, Duncan's test on the strategies for effective implementation showed no significant difference in responses, implying that the adoptable strategies could be globally applicable.

Conclusion and Recommendations

Universally applied strategies for implementing agricultural education programmes in African universities can improve global agricultural education. Thus, universities across different regions can benefit from adopting similar approaches to enhance their agricultural education programs. Successful approaches identified in one university can be replicated and implemented in others, leading to improved agricultural education across the continent. This research emphasises the importance of sharing best practices and collaborating on a global scale to enhance the effectiveness of agricultural education programmes worldwide. The researchers put forward the following recommendations based on the results of this study:

i. African universities should adopt strategic approaches to enhance the effectiveness of agricultural education programmes. This includes fostering collaborations with international partners to support knowledge sharing and capacity building.
ii. University administrators are encouraged to seize these opportunities, while lecturers should actively network for resource and knowledge exchange.
iii. Joint research initiatives between academics and administrators can help address common challenges through shared expertise and innovation.
iv. Policymakers should support exchange programmes to facilitate the adoption of best practices across institutions, ultimately improving education quality and workforce development.
v. Further research is needed to tailor strategies to specific contexts and assess their global feasibility and impact.

References

Ademu, A; Adah, O., C., and Atsumbe, J. A. (2018). Approaches for Enhancing Graduates of Agricultural Education Work Skills towards Social and Economic Transformation in Nigeria. Journal of Poverty, Investment and Development.www.IVSoSlN.4 52, 4 22021-884 6X. An International Peer-reviewed Journal iiste.org

Ahmadi, A. A. & Lukman, A. A. (2015). Issues and Prospects of Effective Implementation of New Secondary School Curriculum in Nigeria. *Journal of Education and Practice*. 6(34), 29-39. Retrieved from https://files.eric.ed.gov/fulltext/EJ1086103.pdf

Amadioha, S. W. (2014). Problem of Implantation and Evaluation of Government Curriculum Senior Secondary School in Nigeria. *Journal of Vocational, Science and Educational Development*. 7(1&2), 84-87

Baridoma, M. P. & Nlebem, B.S (2019).Towards Developing a Blueprint for Effective Vocational Agricultural Education Delivery in Nigeria Secondary Schools.*International Journal of Innovative Agriculture & Biology Research* 7(3):41-48

Britannica Encyclopedia (2020). African Continent.https://www.britannica.com/place/Africa/People

Cremers, P. H. M., Arjen E. J., Wals, R. W., Nienke N., & Martin, M. (2014). "Self-Directed Lifelong Learning in Hybrid Learning Configurations."*International Journal of Lifelong Education* 33 (2): 207–232. doi:10.1080/02601370.2013.838704.

Emmanuel, S. O., Etok, E. U., Ime A. U., Umoh, O. T. & Nse, T. E. (2014). Functional Agricultural Education: Implication for National Development. *Journal of Resourcefulness and Distinction, Vol.5 (1),* pp. 1-9. Available at http://www.globalacademicgroup.com/journals/resourcefulness/function.pdf

Hateley-browne, J., Hodge, L., Polimeni, M., &Mildon, R. (2019). *Implementation in Action. A Guide to Implementing Evidence Informed Programs and Practices.*Retrieved from https://aifs.gov.au/cfca/publications/3-overview-implementation-stages. on 08/08/2020

Ibrahim E. H. (2014). The Problems and Prospects of Agricultural Education in Nigeria. *Journal of Resourcefulness and Distinction*, Vol. 7(1). Available at https://pdfs.semanticscholar.org/e6d7/824242b9c988b0a2eec5777a8bc65ad319ad.pdf

Igbokwe,I. C. (2016). *Problems and Prospects of Educational Policy Implementation in Nigeria: The Way Forward*. Retrieved from https://www.researchgate.net/publication/340511721

Ingram, M. L., Sorensen, T. J., Warnick, Brian K., & Lawver, R. G. (2018). The Influence of School-Based Agricultural Education on Preservice Agriculture Teachers' Choice to Teach. *Journal of Agricultural Education, 59(2), 64-78 https://doi.org/10.5032/jae.2018.02064*

Lin, M. (2017). A Study of the Effects of Digital Learning on Learning Motivation and Learning Outcome. *EURASIA Journal of Mathematics, Science and Technology Education.* Doi. 13. 10.12973/eurasia.2017.00744a.

Makusidi, H. M. (2016). The Role of Vocational Agricultural Education in National Development. Capital *Journal of Education Studies*, April 4(1). Available at http://www.fctcoezuba.edu.ng/journal/journal/Vol41-9.pdf

Moses M. Z., Roger S., Alex C. & Festus, A-F. (n.d). Assessment of Tertiary Agricultural Education in Ghana.*pdf*. Association of International Agricultural Education and Extension Education. Available at https://www.aiaee.org/attachments/article/1357/pa48.pdf

National Commission for Colleges of Education (NCCE, 2008). *Minimum standard for NCE Teachers*, NCCE, Abuja.

Ndem, J. U. (2016). Mechanisms for Enhancing Teachers' Effectiveness in the Implementation of Agricultural Science Programme in Secondary Schools in Afikpo Education Zone of Ebonyi State. *Journal of Education and Practice, 7*(4), 6-16

Olorunleke, I. A., (2014).Problems And Prospects of Curriculum Planning and Implementation in the Nigerian Educational System. *Journal of Teacher Perspective*.8 (2).

Olusoga, E. L. (2014). Prospect and Challenges of Agricultural Education viz-a-viz Attainment of Millennium Development Goals by 2014. *Journal of Educational and Social Research*. Vol. 4(7), 167-171

Osarenren-Osaghae, R. I. & Erabor. O., (2018)**.** Educational policies and programmes implementations: A case study of education funding, universal basic education (UBE) and teacher education. *International Journal of Educational Administration and Policy Studies*. 10(8), 91-102

Osuafor, A. M. (2012). Implementation of the Nigerian New Senior Secondary Education Curriculum Structure: Prospects, Challenges and the Way forward for Sustainable Development. *International Journal of Education, Science & Public Policy in Africa*, *2* (1), 90-97.

Patil, N.P. (2012). Role of education in social change. *International Educational E-journa,l 1*(11) 16-18

Rabin, B., & Brownson, R. (2018).Terminology for dissemination and implementation research. In R. C. Brownson, G. A. Colditz & E. K. Proctor (Eds.), ***Dissemination and implementation research in health: Translating science to practice***. 2, 19-45. New York: Oxford University Press.

RUFORUM (2020). *Call for Papers for 2021 Triennial Conference Scientific Sessions.* Ruforum communication. https://ruforum.wordpress.com/2020/08/17

Sahel and West African Club (2017).The six regions of the African Union.http://www.west-africa-brief.org/content/en/six-regions-african-union

University of Joy-Nigeria (2017). *Aims and Objectives of Agricultural Education*. Retrieved from https://www.unijos.edu.ng/agric/aims

University of Nigeria, Nsukka (UNN, n.d). History of the Department of Agricultural Education. https://www.unn.edu.ng/academics/faculties/agriculture/agriculturalextension/#:~:text=The%20programme%20started%20in%201981,has%20been%20in%20the%20upswing.

Viennet, R. & Pont, B. (2017)**.** Education Policy Implementation: A Literature Review And Proposed Framework. OECD Education Working Paper No. 162 retrieved from http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=EDU/WKP(2017)11&docLanguage=En