

ROLE OF AGRICULTURAL EDUCATION PROGRAMMES IN ENHANCING FOOD SECURITY AND YOUTH EMPLOYMENT AMONG AGRICULTURAL EDUCATION STUDENTS IN EKITI STATE UNIVERSITY

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Abstract

This study examined the role of agricultural education programmes in enhancing food security and youth employment among final-year Agricultural Education students in Ekiti State University, Ado-Ekiti. The descriptive survey research design was adopted. The population consist of 157 agricultural education students in 400 level in Ekiti State University. The total population was used as the sample through a census approach. A structured questionnaire, validated by experts, was used to collect data from the respondents. A pilot study was conducted using 20 respondents outside the study area but having the same characteristics, data collected was analyzed using Cronbach Alpha method and reliability ($r = 0.82$) was obtained. The instrument was administered to the respondents. Data collected were analyzed using descriptive statistics to answer the research questions and Pearson Product Moment Correlation analysis to test the hypotheses at 0.05 level of significance. Findings revealed that agricultural education programmes significantly equip youth with practical skills in farming and agribusiness, thereby enhancing their employability and income-generating potential. The study also established a positive correlation between participation in agricultural education and improved food security outcomes. The study concluded that strengthening agricultural education is both a strategic and sustainable pathway for addressing food insecurity and unemployment challenges in Nigeria. Based on these findings, the study recommends strengthening the integration of experiential learning into agricultural curricula, and introducing incentive schemes which will encourage the young graduates to take up farming as a profession. These measures are essential to harness agricultural education's potential to drive sustainable food systems and youth employment in Nigeria

Keywords: Agricultural education, food security, youth employment, experiential learning, agribusiness.

Introduction

Agricultural education equips individuals, particularly youths, with the skills and knowledge necessary to actively participate in agricultural production, agribusiness, and value chain development. According to Adeyanju, et al (2021), agricultural education refers to

the formal and informal training programmes designed to equip youths and aspiring agripreneurs with the necessary practical skills, technical knowledge, and entrepreneurial competencies required to improve agricultural productivity and performance. A well-structured

agricultural training programme significantly improves the performance and productivity of youth agripreneurs, enabling them to adopt innovative farming practices and business models. These educational initiatives provide both technical competencies and entrepreneurial mindsets, which are critical in addressing unemployment and food insecurity. The programme equips youth with practical skills essential for farming and agribusiness. Njura et al. (2021) highlight that teaching agriculture at the psychomotor domain fosters the development of hands-on competencies such as crop production techniques, livestock management, and farm resource planning.

These skills are directly transferable to real-life agricultural ventures, enabling youths to transition from theoretical understanding to productive engagement in the sector. Saina et al. (2012) further observe that capacity building through structured agricultural education strengthens the ability of young farmers to adopt modern farming methods, improve yield quality, and manage agribusiness enterprises effectively. The views of these authors suggest that the acquisition of practical agricultural skills and entrepreneurial competencies is essential for enhancing agricultural productivity and creating employment opportunities among youths. Such competencies are often developed through agricultural education programmes, including crop production training, livestock production training, farm practical experiences, agricultural entrepreneurship education, agribusiness development, and agricultural extension activities. These programmes provide students with opportunities to apply agricultural knowledge in practical settings, thereby contributing to

improved food security and increased prospects for youth employment.

Agricultural education programmes are structured learning activities designed to equip students with the knowledge, skills, attitudes, and practical experiences required for successful participation in agricultural production and agribusiness. These programmes include areas such as crop production, livestock production, agricultural entrepreneurship, agricultural extension, farm practical training, agribusiness education, and supervised agricultural experiences. According to Jones et al. (2020), agricultural education programmes provide learners with opportunities to acquire agricultural knowledge, practical skills, leadership abilities, and career-related competencies necessary for productive engagement in the agricultural sector. Through participation in these programmes, students develop the capacity to adopt improved agricultural practices, increase agricultural productivity, and contribute to sustainable food production. The competencies acquired through agricultural education programmes are therefore essential for enhancing food security by improving the quantity, quality, and sustainability of food production. Participation in these programmes enables students to establish agricultural enterprises, engage in value-added agricultural activities, and access emerging opportunities within the agricultural value chain. As a result, agricultural education programmes contribute to job creation, income generation, and increased food production, making them a viable strategy for enhancing food security and youth employment among agricultural education students.

Combining classroom instruction with experiential learning, these

programmes not only prepare students for self-employment in farming but also open opportunities for participation in the broader agricultural value chain. This synergy of knowledge and practice ensures that agricultural education students are well-positioned to contribute meaningfully to both food security and rural economic development. Consequently, the link between agricultural education and enhanced food security forms the bedrock for sustainable economic growth and societal development, creating an intersection between youth empowerment and national food security. It is therefore essential to understand how such programmes influence both employment outcomes and food security levels.

Food security, defined as the availability, accessibility, and affordability of nutritious food for all people at all times, remains a pressing challenge in many developing countries. Osabohien and Al-Faryan (2025) view food security as the state in which all individuals, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Accordingly, youth engagement in agriculture is a strategic approach to ensuring food security, as young people are more adaptable to modern technologies and innovative farming practices. Benson (2024) highlights that youth-focused agricultural education programmes have shown measurable impacts in improving food security systems and building resilience against shocks such as climate change and economic instability. However, this position is not universally supported. Osabohien and Al-Faryan (2024), found that although youth participation in agriculture is important, it had no significant impact on food security,

suggesting that structural constraints such as limited access to land, finance, and social protection may weaken the contribution of youth engagement to food security. Despite the growing recognition of agriculture as a solution to hunger, youth participation remains low due to inadequate skills, lack of incentives, and negative perceptions of farming. Addressing these challenges through targeted agricultural education can strengthen the link between youth engagement and sustained food availability. This connection between agricultural education and active youth participation becomes even more significant when viewed through the lens of employment creation and economic empowerment.

Youth employment, another critical concern, is closely tied to agricultural development. Bello et al. (2021) note that youth-in-agribusiness programmes have been instrumental in creating employment opportunities in rural and peri-urban areas, reducing poverty and migration to urban centers. Accordingly, youth employment is the engagement of young people in productive economic activities, whether self-employed or wage-employed, that provide sustainable income, improve their livelihoods, and contribute to national economic growth. In agribusiness, youth employment encompasses opportunities within the agricultural value chain, including production, processing, marketing, and service provision, aimed at reducing unemployment and underemployment among young people. The agricultural sector presents diverse employment prospects along its value chain, from primary production to processing and marketing. Geza et al. (2022) further assert that empowering young people through agricultural education not only

generates direct employment but also fosters self-reliance and reduces dependency on public sector jobs. In contrast, a recent study by Oyinbo et al. (2025) found that a substantial proportion of vocational agricultural education graduates eventually entered non-agricultural occupations because their training did not adequately match labour market demands, indicating that agricultural education alone may not guarantee sustainable employment outcomes without curriculum reforms and stronger industry linkages. By fostering entrepreneurship and agribusiness skills, agricultural education becomes a strategic driver of youth employment, directly influencing livelihood sustainability.

Despite its potential, youth involvement in agriculture faces challenges that hinder its contributions to food security and youth employment. These challenges include inadequate skill acquisition, poor programme implementation, unemployment among graduates, and low participation in agriculture. Haruna et al. (2019) identify challenges such as poor access to credit, inadequate infrastructure, and the perception of agriculture as a low-status occupation. These limitations suggest that without addressing both the financial and social image of farming, youth interest will remain low. Similarly, S. Adjognon et al. (2017) reported that limited access to productive resources, finance, and agricultural support services significantly constrains youth participation in agriculture across Sub-Saharan Africa, despite the sector's employment potential. Building on this concern, Giwu et al. (2024) emphasize that enhancing youth participation in agricultural enterprises requires interventions that combine skill development with enabling

environments, such as access to markets and modern technology. This view reinforces the idea that youth engagement cannot thrive in isolation from supportive systems and resources. In the same vein, Kote et al. (2024) note that fostering youth participation in agriculture is essential for achieving sustainable development, food security, and economic growth. However, a contrasting perspective was presented by Osabohien and Al-Faryan (2024), who found that youth participation in agriculture did not significantly improve food security in Nigeria, arguing that broader structural issues such as insecure land tenure, weak institutions, and inadequate social protection may limit the effectiveness of youth participation alone. Collectively, these findings suggest that the success of agricultural education programmes hinges on their ability to make agriculture appealing, profitable, and accessible to the younger generation.

Enhancing effective agricultural education programmes therefore requires not only classroom-based instruction but also experiential learning. Njura et al. (2021) propose that teaching agriculture at the psychomotor domain enhances practical skills that directly translate into productivity and income generation. This means that when students engage in activities such as crop cultivation, animal husbandry, and farm management, they gain confidence and competence that can be applied in real agricultural settings, thus improving their employability. Saina et al. (2012) support this by demonstrating that building farmers' capacity through agricultural education positively impacts food security outcomes in rural communities. Such outcomes are achieved because trained individuals are better equipped to adopt improved farming practices, manage resources efficiently, and

increase yields, ultimately contributing to community resilience. By integrating hands-on training with theoretical knowledge, youth can better connect agricultural education with tangible opportunities in farming and agribusiness. This integration of skills, employment, and food security outcomes underscores the central argument of this paper: that enhancing food security and youth employment through agricultural education programmes is not only possible but necessary for sustainable development in Nigeria and beyond.

Statement of the Problem

In many parts of Ekiti State, food insecurity remains a pressing challenge, with communities struggling to meet the nutritional needs of their growing populations. At the same time, youth unemployment rates continue to rise, leaving many youths without sustainable livelihoods. Despite the recognized potential of agriculture as a driver of both food security and employment, participation of youth in agricultural ventures appears to be limited. This situation raises concerns about whether existing agricultural education programmes are effectively equipping youths with the skills, knowledge, and motivation required to engage in farming and agro-business. Despite the increasing concerns about youth unemployment and food insecurity, limited empirical evidence exists on the contribution of agricultural programmes to address these challenges in Ekiti State. These uncertainties underscore the need to examine the role of agricultural education programmes in addressing food insecurity and unemployment among youth in Ekiti State.

Purpose of the Study:

The main purpose of this study is to find out the role of Agricultural Education programmes in enhancing food security and youth employment among Agricultural Education students in Ekiti State University, in Ekiti. Specifically, the study aims to:

1. Find out how Agricultural Education programmes equip Agricultural Education students with practical skills for farming and agro-business.
2. Examine how Agricultural Education programmes influence Agricultural Education students' involvement in agriculture.
3. Find out whether Agricultural Education programmes contribute to increased food security in local communities.

Research Questions

The following research questions were raised to guide the study.

1. How do agricultural education programmes equip Agricultural Education students with practical skills for farming and agro-business?
2. In what way do agricultural education programmes impact students participation in agricultural activities?
3. To what extent do agricultural education programmes contribute to increased food security in local communities?

Research Hypotheses

The following hypotheses were formulated and will be tested at 0.05 level of significance

1. There is no significant relationship between Agricultural Education programmes and the acquisition of practical skills for farming and

agribusiness among Agricultural Education students.

2. There is no significant influence of Agricultural Education programmes on students' involvement in agriculture.

Methodology

This study adopted the descriptive survey research design, which is considered appropriate for obtaining the opinions of respondents on the subject matter without manipulating any variables. The population for the study comprised all 157 final-year (400 level) students of Agricultural Education in Ekiti State University, Ado-Ekiti, as obtained from the departmental records for the 2024/2025 academic session. Due to the manageable size of the population, the entire 157 students were included in the study through a census approach, thereby eliminating the need for sampling. The instrument for data collection was a structured questionnaire developed by the researcher, divided into sections that addressed the research questions of the study. The questionnaire contained Likert-scale items (SD for Strongly Disagree, D for Disagree, A for Agree and SA for Strongly Agree). To ensure face and content validity, the instrument was reviewed by two experts from the Department of Vocational and Technical Education and one expert from the Department of Tests and Measurement in Ekiti State University. This was to ensure that the instrument measures what it purports to measure.

A pilot test of the questionnaire was conducted among 20 students of Agricultural Education from Bamidele Olumilu University of Science and Technology (BOUSTI) Ekiti State who were not part of the main study but have the same characteristics. The reliability of the instrument was established using the test-retest method, which yielded a coefficient of 0.82, indicating that the instrument was reliable for data collection. Data collection was carried out by the researcher with the assistance of two trained research assistants. The data collected were analysed using descriptive statistics such as percentages and means to answer the research questions, while Pearson Moment Correlation statistics were used to test the hypotheses at 0.05 level of significance. A decision rule was applied in which a mean score of 2.50 and above was taken as agreement, while mean scores below 2.50 were taken as disagreement.

Results

This section presents the results of the study based on the responses obtained from the administered questionnaire. The analysis is organised according to the three research questions. For each research question, the results are summarised in tabular form, followed by interpretation of the findings.

Research Question 1: How do agricultural education programmes equip students with practical skills for farming and agro-business?

Table 1: Agricultural Education programme and practical skills

S/N	Items	SA	A	D	SD	Mean	Decision
1	Agricultural education have improved my practical farming skills.	80	50	15	12	3.26	Agree
2	I have learned modern farming techniques through agricultural education	75	55	18	9	3.25	Agree
3	The programmes included cultural farming activities like planting, harvesting, or animal husbandry	70	60	15	12	3.20	Agree
4	I feel confident to start my own farming or agribusiness because of the training received	78	52	17	10	3.26	Agree
5	I can apply business principles in managing a farm or agro-business.	82	50	15	10	3.29	Agree

The results in Table 1 show that all the items had mean scores ranging from 3.20 to 3.29, which are above the decision mean value of 2.50. This indicates that respondents agreed that agricultural education programmes in Ekiti State University provide practical training in modern farming techniques, equip students with agribusiness management skills, and build their capacity to establish and manage

agricultural enterprises. The high mean values suggest strong agreement that these programmes significantly enhance hands-on competence in farming and agribusiness.

Research Question 2: In what way do agricultural education programmes impact students participation in agricultural activities?

Table 2: Agricultural Education programme and youth participation

S/N	Items	SA	A	D	SD	Mean	Decision
1	Agricultural education programmes have increased my interest in farming.	85	48	14	10	3.32	Agree
2	Agricultural education has increased my interest in pursuing agriculture as a career.	80	50	15	12	3.26	Agree
3	I plan to work in the agricultural sector after completing my education.	75	52	20	10	3.22	Agree
4	My peers have shown increased interest in agriculture after participating in the programme.	78	50	18	11	3.24	Agree
5	Agricultural education has exposed me to profitable opportunities in the agricultural sector	90	45	12	10	3.36	Agree

As shown in Table 2, the mean scores ranged from 3.22 to 3.36, all of which are above the 2.50 benchmark. This means that respondents agreed that agricultural education has positively influenced youth participation in agriculture by raising interest levels, improving attitudes toward farming as a

career, exposed them to profitable opportunities and motivating graduates to venture into agricultural-related activities. The consistently high mean values indicate that the programme serves as an effective motivator for youth engagement in agriculture.

Research Question 3: To what extent do agricultural education programmes contribute to increased food security in local communities?

Table 3: Contribution to food production

S/N	Items	SA	A	D	SD	Mean	Decision
1	Agricultural education programmes have helped increase food security in my community.	82	50	15	10	3.29	Agree
2	Agricultural education has increased my awareness of modern farming technologies that boost food supply.	80	52	15	10	3.28	Agree
3	Participation in agricultural education programmes has improved my capacity to manage soil fertility for better yields.	78	55	14	10	3.27	Agree
4	Agricultural education programmes have enhanced my ability to reduce post-harvest losses.	85	48	14	10	3.32	Agree
5	Agricultural education has improved my knowledge of sustainable farming practices	75	52	20	10	3.22	Agree

The results presented in Table 3 reveal mean scores between 3.22 and 3.32 all exceeding the decision mean value of 2.50. This indicates agreement that agricultural education contributes to increased food security by producing graduates who engage in farming, improve capacity to manage soil fertility for better yield, reduce post-harvest losses, and help improve knowledge of sustainable farming practices. The high mean scores reflect respondents' strong

perception that these programmes play a vital role in strengthening food security.

Test of Hypotheses

Hypothesis 1: There is no significant relationship between Agricultural Education programmes and the acquisition of practical skills for farming and agribusiness among Agricultural Education students.

Table 4: Pearson Moment Correlation analysis of Agricultural Education programmes and practical skills

Variables	N	Mean	SD	r_cal	r_tab(0.05, df=155)	Sig.	Decision
Agricultural Education Programmes & Practical Skills	157	3.84	0.52	0.682	0.159	0.000	Reject

The calculated correlation coefficient ($r_{cal} = 0.682$) is greater than the critical r value ($r_{tab} = 0.159$) at 0.05 level of significance with 155 degrees of freedom, indicating a significant positive relationship between Agricultural Education programmes and acquisition

of practical skills. Therefore, the null hypothesis that there is no significant relationship between Agricultural Education programmes and the acquisition of practical skills among Agricultural Education students is rejected. Hence, there is significant

relationship between Agricultural Education students and practical skills acquisition.

Hypothesis 2: There is no significant influence of Agricultural Education programmes on students involvement in agriculture.

Table 5: Pearson Moment Correlation analysis of Agricultural Education programmes and youth involvement

Variables	N	Mean	SD	r_cal	r_tab(0.05, df=155)	Sig.	Decision
Agricultural Education Programmes & Youth Involvement	157	3.76	0.49	0.654	0.159	0.000	Reject

The calculated correlation coefficient ($r_{cal} = 0.654$) is greater than the critical r value ($r_{tab} = 0.159$) at 0.05 level of significance with 155 degrees of freedom. This means agricultural education programmes have a significant influence on youth involvement in agriculture. Hence, the null hypothesis there is no significant influence of Agricultural Education programmes on students involvement in agriculture is rejected.

Discussion of Findings

The findings of this study revealed that agricultural education programmes significantly equip youth with practical skills for farming and agro-business. This supports the assertion of Njura, et. al (2021), who argued that teaching agriculture at the psychomotor domain facilitates skill acquisition, particularly in crop and livestock management, thereby enhancing food security. In line with this, the results of the present study showed that respondents demonstrated competence in farm planning, modern cultivation techniques, and small-scale agro-processing after participating in structured agricultural education activities. The study also found that practical exposure through school-based farms and agro-enterprises provided learners with hands-on experiences,

preparing them for self-reliance in agriculture. This aligns with Adeyanju et. al (2021), who reported that youth agricultural training programmes improve participants' technical knowledge, entrepreneurial capacity, and productivity. Similarly, Bello et al. (2021) observed that youth-in-agribusiness initiatives create employment opportunities by enabling participants to start and manage profitable agricultural ventures.

The results indicate that agricultural education does not only impact farming skills but also builds entrepreneurial competencies, such as record-keeping, marketing, and value addition. This corroborates the findings of Giwu et al. (2024), who emphasised that factors such as skill training, market linkages, and access to resources are key drivers of youth participation in agribusiness. The present study's findings suggest that when agricultural education programmes are well-structured, they promote both agricultural productivity and business development.

The findings also reveal that despite the positive outcomes, certain challenges such as inadequate funding, limited access to modern farming equipment, and insufficient linkage with agro-industries still hinder optimal skill transfer. This resonates with the

observations of Haruna et al (2019), who noted that poor infrastructure and lack of institutional support remain significant barriers to youth participation in agriculture. Importantly, the results align with Saina et al. (2012), who found that building rural farmers' capacity through secondary school agricultural education significantly improves food production and community resilience. This study extends that finding by showing that such programmes also foster occupational interest in agro-business among youths, positioning agriculture as a viable career choice. Moreover, Kote et al. (2024) highlighted that engaging young people in agriculture contributes to sustainable development goals related to poverty reduction, food security, and economic growth objectives that this study's results also support.

The discussion affirms that agricultural education programmes are instrumental in equipping youth with the practical and entrepreneurial skills necessary for farming and agro-business success. These findings not only validate the proposed hypotheses but also strengthen the argument for sustained investment in school-based agricultural initiatives to prepare the next generation of agripreneurs.

Conclusion

The findings of this study underscore the critical role of agricultural education programmes in equipping young people with the practical skills necessary for productive engagement in farming and agribusiness. The integration of theoretical knowledge with hands-on training in crop production, livestock management, and agro-enterprise skills significantly enhances graduates' readiness for self-employment and sustainable livelihoods. The results also reveal that such programmes contribute

meaningfully to food security by increasing the capacity of young people to adopt modern farming techniques, improve yields, and engage in value-adding agricultural ventures. Furthermore, agricultural education fosters entrepreneurial mindsets that enable graduates to create employment opportunities, not only for themselves but also for others, thereby reducing youth unemployment. The study concludes that strengthening agricultural education is both a strategic and sustainable pathway for addressing food insecurity and unemployment challenges in Nigeria.

Recommendations

Based on the findings, the following recommendations are proposed:

1. Agricultural curricula should allocate more time and resources to experiential learning activities, such as school farms, demonstration plots, and agribusiness simulations by establishing partnerships between universities, agricultural extension services, and agribusiness firms to provide students with supervised industrial training and field exposure.
2. Courses on agribusiness management, marketing, and value addition should be integrated into agricultural programmes to prepare students for self-employment. This can be achieved by organizing entrepreneurship boot camps, business plan competitions, and mentorship schemes in collaboration with industry experts.
3. There should be deliberate efforts to connect graduates with financing, input suppliers, and market outlets to enable them to start viable agribusinesses by creating university-led agribusiness

incubation centres that provide start-up grants, low-interest loans, and access to cooperative marketing systems.

4. Governments should introduce incentive schemes, such as tax holidays, land allocation, and subsidised inputs, to encourage young graduates to take up farming as a profession.

References

- Adeyanju, D., Mburu, J., & Mignouna, D. (2021). Youth agricultural entrepreneurship: Assessing the impact of agricultural training programmes on performance. *Sustainability*, 13(4), 1697.
- Adjognon, G. S., Liverpool-Tasie, L. S. O., & Reardon, T. (2017). Agricultural input credit in Sub-Saharan Africa: Telling myth from facts. *Food Policy*, 67, 93–105.
- Bello, L. O., Baiyegunhi, L. J. S., Mignouna, D., Adeoti, R., Dontsop-Nguezet, P. M., Abdoulaye, T., ... & Awotide, B. A. (2021). Impact of youth-in-agribusiness program on employment creation in Nigeria. *Sustainability*, 13(14), 7801.
- Benson, C. N. (2024). A State-of-the-Evidence Review: *Impacts of Youth Agricultural Education Programs on Global Poverty, Resilience, and Food Security Results* (Doctoral dissertation).
- Geza, W., Ngidi, M. S. C., Slotow, R., & Mabhaudhi, T. (2022). The dynamics of youth employment and empowerment in agriculture and rural development in South Africa: A scoping review. *Sustainability*, 14(9), 5041.
- Giwu, O., Mdoda, L., Ntlanga, S. S., & Loki, O. (2024). Evaluating factors influencing youth participation in agricultural enterprises: Implications for food security and agribusiness. *The Southern African Journal of Entrepreneurship and Small Business Management*, 16(1), 903.
- Haruna, O. I., Asogwa, V. C., & Ezhim, I. A. (2019). Challenges and Enhancement of Youth Participation in Agricultural Education for Sustainable Food Security. *African Educational Research Journal*, 7(4), 174-182.
- Jones, S., Doss, W., & Rayfield, J. (2020). Examining the status of middle school agricultural education programs in the United States. *Journal of Agricultural Education*, 61(2), 41-56.
- Kote, P., Yallapa, M., Jabeen, A., Srinatha, T. N., Prabhavathi, S. J., Ramasamy, M., ... & Malathi, G. (2024). A scoping review on youth participation in agriculture: sustainable development, food security, and economic growth. *J Sci Res Reports*, 30(5), 947-58.
- Njura, H. J., Kaberia, I. K., & Taaliu, S. T. (2021). Teaching secondary school agriculture at the psychomotor domain: a conceptual framework for enhanced skills development for food security. *The Journal of Agricultural Education and Extension*, 27(2), 111-131.

- Ojo, T. O., Bello, A., Mizik, T., et al. (2025). Rural non-agricultural employment: Implications on food and nutrition security among youth households in Nigeria. *Frontiers in Sustainable Food Systems*, 9, Article 1691586.
- Osabohien, R., & Al-Faryan, M. A. S. (2025). Youth in agriculture and food security in Nigeria. *International Journal of Social Economics*, 52(4), 501-514.
- Saina, E. K., Rono, P. K., Kipsat, M. J., Sulo, T., & Kathuri, N. J. (2012). Food security in Kenya: the impact of building rural farmers' capacity through agricultural education in secondary school. *Journal of Emerging Trends in Educational Research and Policy Studies*, 3(3), 338-345.
- Ugwaka, K. A. (2025). Integrating digital agriculture into the undergraduate agricultural education programmes in Nigerian universities for vocational development. *Unizik Journal of Educational Research, Science and Vocational Studies*, 2(1).