

Motivating Adult Learners toward Agribusiness Vocational Training in Taraba State, Nigeria

Eleweke Mercy Motunrayo

Adult and non-formal Education Department, Federal college of Education, Yola Jalingo, Nigeria

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Abstract— Agribusiness vocational training holds transformative potential for rural adult populations in Taraba State, Nigeria, yet participation rates remain critically low. This study investigated the motivational factors influencing adult learners' engagement with agribusiness vocational training programs in Taraba State, drawing on Self-Determination Theory (SDT) and andragogy as theoretical frameworks. Employing a mixed-methods research design, data were collected from 347 adult learners, 28 vocational instructors, and 14 extension officers across six Local Government Areas (LGAs) in the state. Quantitative data were gathered using a validated 42-item Likert-scale questionnaire, while qualitative insights were obtained through semi-structured interviews and focus group discussions. Findings revealed that economic incentives, perceived social relevance, access to market linkages, and peer support networks were the dominant intrinsic and extrinsic motivators. In contrast, low literacy levels, cultural barriers, family obligations, inadequate training infrastructure, and the absence of government-backed credit facilities emerged as the principal demotivating factors. The study recommends the integration of flexible, context-sensitive curriculum designs that align with the agricultural calendar, the strengthening of farmer cooperative learning clusters, and enhanced policy commitment to agribusiness training funding in Taraba State. These findings contribute to a growing body of knowledge on adult vocational education in Nigeria's Middle Belt region.

Keywords— Adult learning motivation, Agribusiness vocational training, Taraba State, Self-Determination Theory, Andragogy, Rural education, Nigeria, Adult education, Agricultural extension, Rural development, Vocational education.

I. INTRODUCTION

Agriculture remains the cornerstone of Nigeria's economy, accounting for approximately 24% of the nation's Gross Domestic Product (GDP) and providing livelihoods for an estimated 70% of the rural population (National Bureau of Statistics [NBS], 2023). Despite this significance, Nigeria's agricultural sector continues to grapple with structural inefficiencies, particularly in human capital development and value chain management. Taraba State, located in the North-East geopolitical zone and endowed with vast arable land, diverse ecological zones, and abundant water resources, represents one of the country's most agriculturally promising states. Yet, the full potential of this endowment remains largely unrealized.

Agribusiness—the composite of farm and off-farm activities that connect primary agricultural production with final consumers through processing, marketing, and trade—offers a compelling pathway for rural economic transformation. Vocational training in agribusiness encompasses practical instruction in areas such as crop production technologies, post-harvest handling, agro-processing, farm business management, supply chain logistics, and agricultural entrepreneurship. When effectively delivered to adult learners, such training can stimulate income diversification, reduce post-harvest losses, and foster rural enterprise development.

However, the uptake of agribusiness vocational training programs in Taraba State has remained disappointingly low. Reports from the Taraba State Agricultural Development Programme (TADP) indicate that fewer than 18% of eligible rural adults in

the state participated in any formal or semi-formal agribusiness training between 2018 and 2023. This figure is even more troubling given the state government's repeated policy commitments to agricultural transformation. The persistent gap between available training opportunities and actual participation raises a fundamental question: what motivates or demotivates adult learners in Taraba State from engaging with agribusiness vocational training?

This question is not merely academic. Understanding the motivational architecture of adult learners is a prerequisite for designing programs that are genuinely responsive to their needs, aspirations, and lived realities. Traditional deficit narratives that frame low participation as evidence of learner apathy or cultural resistance obscure the systemic, institutional, and personal barriers that shape adult learning decisions. A more nuanced examination—one that centers the perspectives of adult learners themselves—is both overdue and necessary.

This study therefore set out to examine the motivational factors driving and hindering adult learners' participation in agribusiness vocational training in Taraba State, Nigeria. Specifically, the study sought to: (i) identify the primary intrinsic and extrinsic motivational factors influencing adult learners' engagement with agribusiness vocational training; (ii) determine the principal barriers to participation; (iii) assess the role of socio-demographic variables such as gender, age, and educational attainment in shaping motivation; and (iv) propose evidence-based strategies for improving adult learner motivation and training uptake.

II. THEORETICAL FRAMEWORK

This study is grounded in two complementary theoretical traditions: Self-Determination Theory (SDT) and Malcolm Knowles' theory of andragogy. Together, these frameworks provide a robust conceptual lens through which to examine the motivational dynamics of adult learners in vocational education contexts.

2.1 Self-Determination Theory (SDT)

Developed by Deci and Ryan (1985, 2000), Self-Determination Theory posits that human motivation is best understood along a continuum from amotivation through extrinsic motivation to intrinsic motivation. At the core of SDT are three fundamental psychological needs: autonomy (the experience of volition and self-endorsement in one's actions), competence (the sense of effectiveness and mastery in valued activities), and relatedness (the sense of connection and belonging within a community). When these three needs are met within a learning environment, individuals are more likely to develop autonomous motivation—a form of engagement characterized by genuine interest, personal endorsement, and volitional commitment.

In the context of adult agribusiness vocational training, SDT suggests that programs which respect learners' agency, build on their existing competencies, and foster a sense of community are more likely to attract and retain adult participants. Conversely, training environments that are coercive, shame-inducing, or disconnected from learners' communities of practice will undermine intrinsic motivation and reinforce dropout tendencies. SDT has been applied productively in adult education research in sub-Saharan Africa (Adekunle & Olowu, 2021; Nwachukwu, 2022), though its application to agribusiness training in the Middle Belt region of Nigeria remains limited.

2.2 Andragogy

Malcolm Knowles' andragogical model (Knowles, 1984) provides a complementary framework by articulating the distinctive learning characteristics of adults. According to Knowles, adult learners differ from children in several critical respects: they possess a self-concept oriented toward self-direction; they bring a rich reservoir of life experience that constitutes a resource for learning; their readiness to learn is tied to developmental tasks and social roles; they are problem-centered rather than subject-centered in their orientation; and they are internally rather than externally motivated. A sixth principle, later added by Knowles and colleagues, recognizes adults' need to understand why they should learn something before committing to the learning process.

Applied to agribusiness vocational training, andragogy suggests that programs must actively negotiate with adult learners rather than imposing predetermined curricula. Training content must be immediately applicable to learners' agricultural livelihoods, must honor their existing knowledge of farming practices, and must position them as active co-constructors of knowledge

rather than passive recipients of technical information. This theoretical orientation informed both the research design and the interpretive analysis of this study.

III. LITERATURE REVIEW

3.1 Adult Vocational Education in Nigeria: Context and Challenges

Vocational and Technical Education (VTE) in Nigeria operates within a complex policy landscape shaped by the National Policy on Education (NPE), the Technical and Vocational Education and Training (TVET) Policy of 2019, and various state-level frameworks. The National Board for Technical Education (NBTE) and the National Commission for Colleges of Education (NCCE) coordinate vocational training provision, though significant gaps persist in quality, relevance, and reach, particularly in rural areas. The National Directorate of Employment (NDE) has historically delivered agribusiness-related vocational training, though evaluations of program effectiveness have been mixed (Ogundele, 2020; Eze & Ikwuakam, 2021).

Research consistently identifies multiple barriers to adult participation in vocational education in Nigeria, including direct and opportunity costs, geographic inaccessibility, inadequate childcare provisions, scheduling inflexibility, cultural norms that devalue formal training for adults, and the perceived irrelevance of curricula to local production contexts (Adeleke, 2019; Babangida & Umar, 2022). Gender constitutes a particularly significant axis of exclusion: women in rural northern Nigeria face compounded constraints related to mobility, spousal permission, domestic responsibilities, and cultural proscriptions on female participation in mixed-gender learning environments.

3.2 Motivation and Adult Learning in Agricultural Contexts

The literature on motivation for agricultural training among rural adults in sub-Saharan Africa reveals a nuanced picture. Economic motivation—specifically, the prospect of increased income, improved yields, and access to market opportunities—consistently emerges as a dominant driver of training participation (Asante et al., 2020; Birner et al., 2021). However, purely instrumentalist accounts of agricultural training motivation are increasingly challenged by research demonstrating the importance of social identity, community recognition, and self-efficacy as motivational drivers (Nwachukwu, 2022; Osei-Bonsu et al., 2021).

A study by Okeke and Adeyemi (2020) in Kogi State found that adult farmers who perceived agribusiness training as consistent with their occupational identity as "progressive farmers" were significantly more likely to complete training programs than those who experienced training as an implicit criticism of traditional practices. Similarly, research in Tanzania and Kenya has demonstrated that peer mentorship and social learning networks substantially increase motivation and retention among adult agricultural learners (Waweru et al., 2022; Mwangi & Kariuki, 2023). These findings underscore the importance of social and relational dimensions of motivation that go beyond individual incentive structures.

3.3 Taraba State Agricultural Context

Taraba State spans approximately 54,473 square kilometers and hosts a population of approximately 3.7 million people across sixteen Local Government Areas. The state's diverse agroecological zones—ranging from the Guinea Savannah in the north to the Montane forests of the Mambilla Plateau—support a wide range of agricultural commodities, including yam, cassava, maize, sorghum, groundnuts, rice, cocoa, tea, and livestock. Despite this diversity, agricultural productivity in the state remains significantly below potential, constrained by poor rural infrastructure, limited access to improved inputs, inadequate extension services, and fragmented value chains.

The Taraba State Government's Agricultural Transformation Agenda (2021-2025) explicitly identifies human capital development and agribusiness training as priority intervention areas. The program commits to establishing fifty agribusiness training hubs across the state's sixteen LGAs by 2025. Yet baseline assessments conducted for this study revealed that only eleven such hubs were operational as of December 2023, with significant variations in quality, equipment, and instructor capacity. This implementation gap provides the immediate policy context for the motivational challenges explored in this study.

IV. METHODOLOGY

4.1 Research Design

This study adopted a sequential explanatory mixed-methods design, in which quantitative data collection and analysis preceded and informed the subsequent qualitative phase. The mixed-methods approach was chosen to leverage the complementary strengths of both paradigms: quantitative analysis provided breadth and generalizability in identifying motivational patterns across the study population, while qualitative methods provided depth and contextual richness in understanding the lived experiences of adult learners and training facilitators.

4.2 Study Area and Population

The study was conducted across six Local Government Areas (LGAs) in Taraba State: Jalingo, Wukari, Bali, Gashaka, Karim-Lamido, and Zing. These LGAs were purposively selected to represent the state's ecological and socioeconomic diversity. The target population comprised adult learners (defined as individuals aged 18 years and above) who had either participated in, were currently enrolled in, or had been invited to participate in agribusiness vocational training programs within the preceding three years.

4.3 Sampling Procedure and Sample Size

A multi-stage sampling procedure was employed. In the first stage, six LGAs were purposively selected. In the second stage, three agribusiness training hubs or extension centers were randomly selected per LGA, yielding eighteen study sites. In the third stage, adult learners at each site were selected using systematic random sampling from available registers. Using Yamane's (1967) formula for determining sample size at a 95% confidence level and 5% margin of error from an estimated population of 4,200 registered participants across the eighteen sites, a minimum sample of 354 was determined. After accounting for non-response, 347 usable questionnaires were returned, representing a 98.0% response rate. Additionally, 28 vocational instructors and 14 agricultural extension officers were purposively selected for qualitative data collection.

4.4 Data Collection Instruments

The primary quantitative instrument was a researcher-developed and validated 42-item Likert-scale questionnaire, the Agribusiness Training Motivation Scale (ATMS), organized into six subscales: economic motivation (8 items), social-relational motivation (7 items), intrinsic/personal development motivation (8 items), institutional factors (7 items), structural barriers (7 items), and socio-cultural barriers (5 items). The instrument was piloted on 40 adult learners outside the main sample, yielding a Cronbach alpha reliability coefficient of 0.87, indicating strong internal consistency. The instrument was translated into Hausa and Jukun to accommodate participants with limited English proficiency, with back-translation checks performed to ensure conceptual equivalence. Qualitative data were collected through 28 semi-structured individual interviews (averaging 45 minutes each) with vocational instructors and extension officers, and 6 focus group discussions (FGDs) with adult learners (5-8 participants per FGD).

4.5 Data Analysis

Quantitative data were entered into SPSS version 27.0 and analyzed using descriptive statistics (means, standard deviations, and percentages), one-way Analysis of Variance (ANOVA) to assess differences in motivational profiles by demographic variables, and Pearson's Product-Moment Correlation to examine associations between motivational constructs and training participation frequency. Qualitative data were audio-recorded with participants' consent, transcribed verbatim, and analyzed using Braun and Clarke's (2006) six-phase thematic analysis. NVivo 12 software supported qualitative data management and coding. Triangulation of quantitative and qualitative findings was conducted in the interpretation phase to develop a comprehensive account of motivational dynamics.

V. RESULTS AND FINDINGS

5.1 Sociodemographic Profile of Respondents

Of the 347 adult learner respondents, 54.5% were male and 45.5% female. The majority (61.4%) fell within the 25-44 age bracket, with 22.8% aged 18-24 and 15.8% aged 45 and above. In terms of educational attainment, 31.1% had no formal education, 28.8% had primary education, 29.1% had secondary education, and 11.0% held tertiary qualifications. The occupational profile of respondents was predominantly farming (73.8%), with small-scale trading (15.6%) and artisanal work (10.6%) also represented. A summary of motivational factor mean scores is presented in Table 1 below.

TABLE 1
MEAN SCORES OF MOTIVATIONAL FACTORS FOR AGRIBUSINESS TRAINING PARTICIPATION (N=347; SCALE: 1=STRONGLY DISAGREE TO 5=STRONGLY AGREE)

Motivational Factor / Subscale	Mean Score	Std. Dev.	Ranking
Economic incentives and livelihood improvement	4.31	0.61	1st
Access to market linkages and buyers	4.18	0.73	2nd
Peer and community encouragement	4.06	0.79	3rd
Desire for personal/skills development	3.94	0.82	4th
Social recognition as a 'modern farmer'	3.87	0.88	5th
Government/NGO facilitation and support	3.72	0.91	6th
Access to credit/inputs after training	3.65	0.97	7th

5.2 Key Motivating Factors

Economic motivation emerged as the most powerful driver of agribusiness training participation, with a mean score of 4.31. In FGDs, participants consistently articulated the desire to "earn more from the same land" as a primary rationale for seeking training. As one female participant in the Wukari FGD stated, the aspiration to learn how to add value to cassava and sell processed products rather than raw tubers had motivated her attendance despite significant travel costs. This finding is consistent with SDT's conceptualization of identified regulation, wherein adults engage in activities because they recognize their personal importance, even when they are not intrinsically enjoyable per se.

Access to market linkages ranked second (mean = 4.18), reflecting a sophisticated understanding among adult learners that technical skills alone are insufficient without reliable market outlets. Respondents who had been exposed to previously organized farmer-buyer linkage events through the Taraba Agribusiness Development Programme (TADP) reported significantly higher motivation scores than those without such exposure ($F(2, 344) = 14.37, p < .001$). This finding underscores the importance of embedding market development support within vocational training programs rather than treating technical skills training as an end in itself.

Peer and community encouragement (mean = 4.06) emerged as the third most significant motivator, a finding that resonated strongly with SDT's emphasis on relatedness. Qualitative data revealed that in communities where local opinion leaders—including traditional rulers, community development association chairpersons, and church or mosque leaders—visibly endorsed agribusiness training, participation rates were significantly higher. An agricultural extension officer in Bali LGA described how the endorsement of the Ardo'en (community head) for a poultry management training program in 2022 resulted in a threefold increase in enrollment compared to the previous cohort.

5.3 Principal Barriers to Participation

Five primary barriers to agribusiness training participation were identified from the data. First, low literacy levels constrained both the comprehension of training materials and the confidence of potential participants to enroll in programs perceived as academically oriented (cited by 67.4% of respondents). Second, cultural and gender barriers—particularly restrictions on women's mobility and the expectation that adult men should generate income rather than "return to school"—significantly inhibited participation, especially in the Karim-Lamido and Zing LGAs, where conservative social norms are more pronounced. Third, scheduling conflicts with the agricultural calendar meant that training sessions offered during peak planting or harvesting seasons were poorly attended regardless of content quality. Fourth, the absence of government-backed microcredit schemes to help trainees invest in new agribusiness practices post-training reduced the perceived utility of training. Fifth, inadequate training infrastructure—including lack of functional demonstration farms, processing equipment, and reliable electricity—undermined the credibility and attractiveness of available programs.

5.4 Gender and Age Differences in Motivation

One-way ANOVA revealed significant gender differences in motivational profiles. Female respondents scored significantly higher on intrinsic motivation subscales (personal development and community contribution) compared to male respondents

($F(1, 345) = 8.21, p = .004$), but significantly lower on institutional motivation subscales related to government facilitation ($F(1, 345) = 6.43, p = .011$), reflecting women's greater reliance on informal networks and lower confidence in government-delivered programs. Younger adult learners (18-24 years) demonstrated higher levels of aspiration-related motivation—particularly the desire to transition out of subsistence farming—while older learners (45+) were more strongly motivated by the desire to pass on improved techniques to their children and preserve their social standing within farming communities.

VI. DISCUSSION

The findings of this study illuminate a complex, multi-layered motivational landscape that challenges both deficit narratives of rural adult learners in Nigeria and purely instrumentalist accounts of vocational training participation. Several important implications emerge from the data.

The primacy of economic motivation, while unsurprising given the poverty context of rural Taraba State, should not be interpreted as evidence that adult learners are solely transactional in their educational orientations. The qualitative data revealed that economic aspirations were frequently interwoven with narratives of dignity, family responsibility, and community development. This resonates with Nwachukwu's (2022) contention that economic and social motivations in African adult education contexts are not easily disentangled, as livelihood improvement carries deep social meaning within communal value systems.

The significance of peer and community encouragement as a motivational factor has critical programmatic implications. Current agribusiness training designs in Taraba State tend to be structured around individual skill acquisition rather than collective learning and community mobilization. A shift toward cooperative learning models—in which groups of community members are recruited, trained, and supported together—could harness the relational motivation identified in this study. This approach aligns with Vygotsky's (1978) zone of proximal development and with recent evidence from farmer learning group interventions in Ghana and Ethiopia (Asante et al., 2020; Abebe et al., 2021).

The finding that scheduling conflicts with the agricultural calendar constitute a major barrier reflects a fundamental misalignment between training program design and the temporal rhythms of rural life. This is not a new observation in Nigerian adult education research (Adeleke, 2019; Babangida & Umar, 2022), yet it persists in practice, suggesting institutional inertia rather than lack of awareness. The integration of agricultural calendar mapping into training program planning—ensuring that intensive training sessions are offered during the dry season when farmers have more time—should be a non-negotiable design requirement.

Gender disparities in motivation and participation represent perhaps the most urgent finding of this study. Women's higher intrinsic motivation scores, combined with their significantly lower rates of actual participation, suggest that the barriers they face are primarily structural and social rather than attitudinal. This has important implications for program design: rather than focusing on changing women's attitudes toward training, interventions should focus on removing structural barriers through community sensitization campaigns, female-only training cohorts, childcare provision during training sessions, and the deliberate recruitment of female instructors and community champions.

The absence of post-training credit and market linkage support as a demotivating factor speaks to a critical gap in the current agribusiness training ecosystem in Taraba State. Training programs that equip adults with new skills but fail to provide the capital and market connections needed to apply those skills create frustration and erode trust in future training invitations. Vocational education researchers have increasingly called for the integration of training programs within broader agricultural support ecosystems that include input access, credit facilitation, and market development (Birner et al., 2021; Waweru et al., 2022). The findings of this study provide further empirical support for this systemic approach.

VII. RECOMMENDATIONS

Based on the findings and discussion above, the following evidence-based recommendations are made to policymakers, program designers, and implementing agencies involved in agribusiness vocational training in Taraba State:

- 1) **Adopt Agri-Calendar-Aligned Training Schedules:** Agribusiness training programs should be systematically scheduled during the dry season (November to February) when farmers' time demands are lowest. A state-wide agricultural calendar mapping exercise should be conducted and shared with all training providers to prevent scheduling conflicts.

- 2) **Establish Community-Based Learning Clusters:** Rather than recruiting individual learners, training programs should recruit cohorts of 15-20 community members from the same village or ward, building on existing social networks and community trust. These learning clusters should continue as peer support and enterprise development groups after formal training ends.
- 3) **Integrate Market Linkage and Credit Facilitation into Training Packages:** No vocational training program in agribusiness should be considered complete without connecting graduates to market buyers and microfinance facilities. The Taraba State Government should mandate the establishment of training-to-finance corridors in all TADP-funded programs.
- 4) **Design Gender-Responsive Training Structures:** Women-only training cohorts should be established in LGAs with pronounced gender barriers. Female community mobilizers should be recruited and trained to serve as recruitment agents. Training venues should be within walking distance of participants' homes, and crèche facilities should be provided for mothers of young children.
- 5) **Strengthen Instructor Capacity in Adult Learning Pedagogy:** Vocational instructors in agribusiness training centers should receive mandatory training in adult learning facilitation techniques, including andragogical principles, participatory training methods, and culturally responsive communication. The current over-reliance on lecture-based, textbook-oriented instruction is misaligned with adult learners' experiential learning orientations.
- 6) **Leverage Traditional and Religious Leaders as Motivation Champions:** State and LGA extension services should systematically engage traditional rulers, religious leaders, and community development associations as advocates for agribusiness training participation. Community endorsement was identified as a powerful motivator, yet this resource remains largely untapped in current program designs.
- 7) **Invest in Demonstration Infrastructure:** Functional demonstration plots, processing equipment, and solar-powered training facilities should be established at all TADP training hubs. The credibility and attractiveness of training programs is significantly undermined when learners cannot see and practice with the technologies being promoted.
- 8) **Establish Monitoring and Evaluation Frameworks:** Regular monitoring and evaluation of training programs should be conducted to assess effectiveness, identify challenges, and inform continuous improvement.

VIII. CONCLUSION

This study has provided a comprehensive empirical examination of the motivational factors shaping adult learners' engagement with agribusiness vocational training in Taraba State, Nigeria. The findings demonstrate that adult learners in this context are not passive or apathetic actors in relation to vocational education, but rather purposive decision-makers who weigh the perceived benefits, social implications, and practical feasibility of training participation against the very real constraints of poverty, family obligation, and structural exclusion.

The study's contribution is twofold. Theoretically, it extends the application of Self-Determination Theory and andragogy to the specific context of agribusiness vocational training in Nigeria's Middle Belt region, demonstrating the explanatory power of these frameworks while also highlighting dimensions—particularly the communal and relational aspects of motivation—that require greater theoretical elaboration. Empirically, it provides a rich, multi-method evidence base on which program designers and policymakers in Taraba State can draw.

Ultimately, the transformation of Taraba State's agricultural economy depends not only on technical interventions and market infrastructure but on the meaningful engagement of adult rural populations as skilled, entrepreneurial agribusiness actors. Motivating adult learners toward agribusiness vocational training is therefore not merely a pedagogical challenge but a development imperative. The evidence presented in this study suggests that with the right institutional commitments, community engagement strategies, and gender-responsive program designs, this challenge is eminently surmountable.

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CONFLICT OF INTEREST

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

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