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Why agriculture is losing appeal among secondary students: Evidence from Phalombe Cluster, Malawi

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ABSTRACT

Agriculture remains Malawi's economic backbone, yet secondary school students demonstrate negative attitudes toward the subject. This mixed-methods study investigated the causes of these attitudes among 90 students, six teachers, and three head teachers from three secondary schools in Phalombe District. Data collection utilized focus group discussions and interviews, which were analyzed through thematic analysis and descriptive statistics. The results revealed learner-related factors (57%) as the primary contributors, including limited career awareness and negative agricultural work associations. Students (44.4%) reported attention deficits during lessons, while resource inadequacy affected all the schools. Key recommendations included improved resource provision, career sensitization, role model exposure, and increased practical work. The findings suggest that multifaceted interventions addressing learner perceptions, teacher capacity, curriculum design, and resource allocation are essential for improving agricultural education outcomes and supporting agricultural development in rural Malawi.

Keywords: agriculture education, student attitudes, secondary schools, Malawi, rural education, career perceptions

INTRODUCTION

Agriculture is the economic backbone of Malawi, generating approximately 80% of foreign currency and employing a similar percentage of the population, directly or indirectly (Malawi Institute of Education, 2013; Mlangeni et al., 2015). Recognizing its strategic importance, the Malawian government established agriculture as a core subject in the secondary school curriculum, aiming to equip youth with the knowledge and skills for immediate productivity and further academic pursuit (Chirwa et al., 2014). However, this critical investment is jeopardized by pervasive negative student attitudes towards the subject. Initial research by Engler and Kretzer (2014) revealed widespread negativity among students in Mzimba District, a concern that threatens to undermine both educational outcomes and long-term agricultural development, particularly in rural communities where its impact could be most transformative.

This challenge is part of a global pattern where agricultural education struggles for relevance and prestige. International studies consistently identify systemic barriers to student engagement. In Nigeria, students perceive agricultural careers as low-status, tedious, and poorly compensated (Ahire et al., 2020), a finding echoed in a systematic review of African youth engagement, which highlighted persistent barriers like limited capital, inadequate training, and negative social perceptions (Boye et al., 2024). Even upon completion of agricultural programs, students often lack confidence in their career prospects (Maka, 2024), with only a small fraction of Nigerian agricultural graduates willing to enter agribusiness (Ikuemonisan et al., 2022). This systematic neglect is further evidenced in rural Indonesia, where over 77% of teachers rarely integrate agricultural topics into discourse, even within agrarian communities (Nugraha et al., 2024).

These global trends are rooted in a complex framework of influences. Student attitudes are shaped by perceptions of agricultural careers, potent social and parental pressures favoring white-collar professions, the quality of teaching, and the availability of learning resources (Apori et al., 2003; Laitinen et al., 2023; Ondigi et al., 2011). While this international body of work is informative, a significant gap exists in understanding the specific, contextual drivers of these attitudes within the unique socio-economic landscape of rural Malawi. Therefore, this study aimed to:

(1) investigate the specific factors contributing to negative attitudes among secondary school students toward agricultural education in Phalombe District,

(2) examine the effects of these attitudes on teaching and learning processes, and

(3) propose evidence-based, contextually-relevant strategies for improvement.

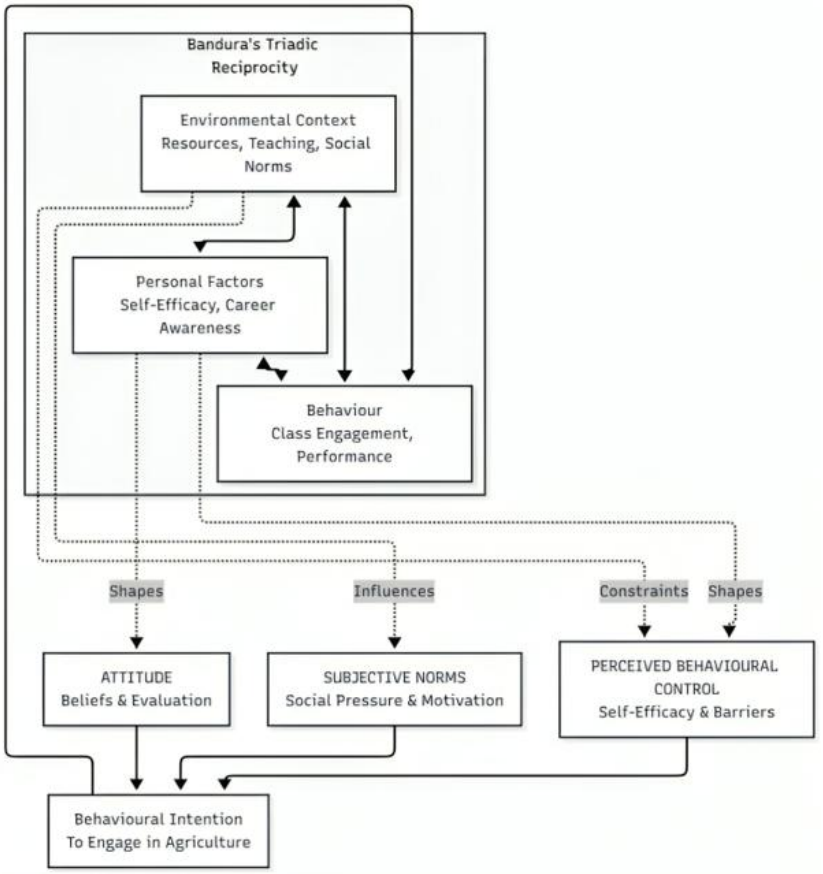

Figure 1. Integrated theoretical framework (this model illustrates the formation of student attitudes and behaviours by combining Bandura's [1986] SCT [the cyclical relationship between environment, personal factors, and behavior] with Ajzen's [1991] TPB [where behavioral Intention is shaped by attitude, subjective norms, and perceived behavioral control] & the framework shows how external factors and internal beliefs interact to influence a student's engagement with agricultural education) (Adapted from Ajzen, 1991; Bandura, 1986)

The investigation is framed by an integration of social cognitive theory (SCT) (Bandura, 1986) and the theory of planned behavior (TPB) (Ajzen, 1991) (**Figure 1**). SCT posits that learning and attitude formation occur through triadic reciprocity between personal factors (e.g., self-efficacy and career awareness), environmental influences (e.g., resource availability and teaching quality), and behavior (e.g., classroom engagement). TPB complements this by specifying that behavioral intention is determined by attitudes toward the behavior, subjective norms (perceived social pressure), and perceived behavioral control (confidence in one's ability to succeed).

This combined framework provides a robust lens for analyzing how Malawian students' attitudes are formed within a network of personal beliefs, social pressures, and institutional constraints.

METHODOLOGY

A convergent mixed-methods design was employed to provide a comprehensive understanding of the research problem. The study was conducted in three public secondary schools within the Phalombe Cluster in Southern Malawi, a region characterized by smallholder agriculture.

A total of 99 participants were targeted. This included 90 students (30 from each school, with stratified random sampling ensuring gender balance), 6 agriculture teachers (2 from each school), and 3 head teachers. The teachers and head teachers were selected via purposive sampling based on their direct involvement with the subject and school administration.

Data collection was triangulated through three methods:

- Focus group discussions (FGDs): Held with student groups to explore in-depth their attitudes, perceptions, and experiences with agricultural education.
- Semi-structured interviews: Conducted with agriculture teachers and head teachers to gather institutional perspectives, pedagogical challenges, and insights into resource constraints.
- Demographic questionnaire: A short, structured questionnaire was used to collect background data from all participants.

The qualitative data from FGDs and interviews were transcribed verbatim and subjected to thematic analysis using a combination of inductive and deductive coding. Quantitative data from the questionnaires were analyzed using descriptive statistics (frequencies, percentages) with JASP (JASP Team, 2025). The integration of quantitative and qualitative findings

Table 1. Demographic characteristics of study participants

Participant category		Variable	n	Percentage (%)
Students (n = 90)	Gender	Male	45	50.0
		Female	45	50.0
	Class Level	Form 1	30	33.3
		Form 3	30	33.3
		Form 4	30	33.3
Agriculture teachers (n = 6)	Gender	Male	4	66.7
		Female	2	33.3
	Age	25-34 years	1	16.7
		≥ 35 years	5	83.3
	Qualification	Diploma	4	66.7
		First degree	2	33.3
	Experience	< 1 year	1	16.7
		≥ 11 years	5	83.3
Head teachers (n = 3)	Gender	Male	3	100
		Female	0	0.0
	Qualification	Diploma	1	33.3
		First degree	2	66.7
	Experience	≥ 15 years	3	100

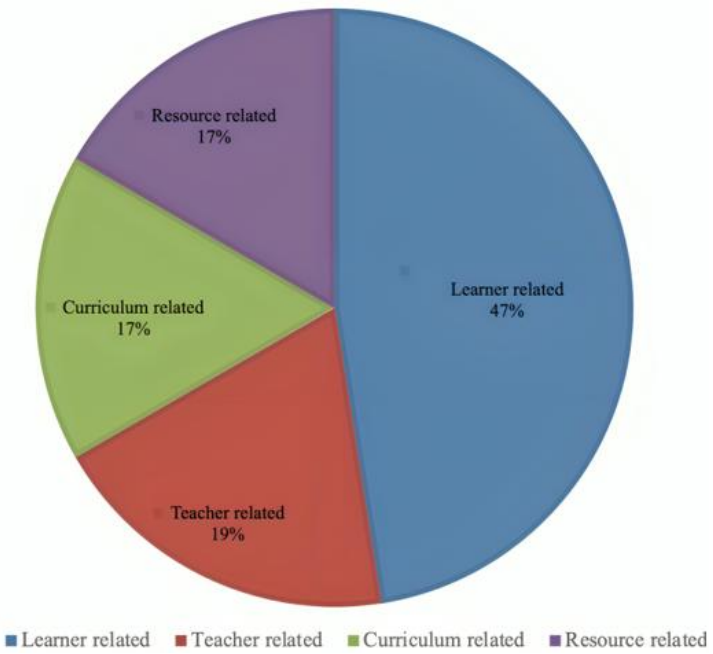

Figure 2. Distribution of factors contributing to negative attitudes toward the agriculture subject in Phalombe (Source: Authors' own elaboration)

occurred during the interpretation phase, where numerical trends were elaborated and clarified by the nuanced narratives from the qualitative data.

Ethical approval was obtained from the relevant institutional authorities. Informed consent was secured from all participants, with additional assent from parents for minors. Anonymity and confidentiality were maintained using identification codes, and all COVID-19 safety protocols were adhered to during data collection.

RESULTS

Participant Demographics

The study involved 90 students, 6 agriculture teachers, and 3 head teachers. All targeted individuals participated in the survey, achieving a 100% response rate. The teacher group was experienced, with 83% having over 11 years of service, but their qualifications suggested a possible capacity gap: 67% held diplomas as their highest qualification, while only 33% possessed university degrees. The demographic characteristics are summarized in **Table 1**.

Factors Contributing to Negative Attitudes

The analysis identified four primary categories of causal factors, with learner-related issues being the most prominent (**Figure 2**).

Table 2. Effects of student negative attitudes on agricultural education processes (n = 99)

Effect category	n	Percentage (%)	Description
Attention deficits	44	44.4	Instances of reduced focus or cognitive disengagement during instruction
Ineffective study practices	34	34.4	Inadequate time management and poor self-regulated learning behaviours
Instructional absenteeism	13	13.1	Irregular attendance or frequent absence from agriculture classes
Low participatory engagement	8	8.1	Limited verbal and practical involvement in classroom activities
Total responses	99	100	Multiple responses possible

Note. Percentages are based on multiple responses provided by participants

Table 3. Learner-focused intervention strategies

Strategy	n	Percentage (%)	Expected impact
Career sensitization on agriculture importance	43	43.4	Enhanced career awareness
Role model exposure (successful agriculture professionals)	25	25.3	Improved subject perception
Increased practical work opportunities	23	23.2	Better hands-on engagement
Educational field visits	8	8.1	Real-world application understanding
Total responses	99	100	

Table 4. Teacher-focused intervention strategies

Strategy	n	Percentage (%)	Description
Improved working conditions and motivation	40	40.4	Enhanced teacher performance
Reduced absenteeism and teacher consistency	28	28.3	Better curriculum coverage
Frequent student assessment	13	13.1	Improved learning monitoring
Professional development and in-service training	9	9.1	Updated teaching skills
Student career sensitization by teachers	9	9.1	Better guidance provision
Total responses	99	100	

Table 5. Learner-focused intervention strategies

Strategy	n	Percentage (%)	Expected impact
Content reduction and streamlining	60	60.6	Better curriculum completion
Provision of concise teaching notes	28	28.3	Improved learning materials
Increased weekly period allocation	11	11.1	Adequate instruction time
Total responses	99	100	

Students predominantly associated agriculture with strenuous manual labor (57%), viewing it as a vocation for the uneducated and a last-resort career. A critical sub-theme was the limited exposure to successful agricultural professionals and modern, profitable agribusiness models, leading to a narrow and outdated perception of the sector.

Pedagogical challenges significantly contributed to disengagement. About 23% of students reported high teacher absenteeism during scheduled agriculture lessons and an over-reliance on theoretical note-giving, with limited integration of hands-on, practical work. 20% of the respondents complained that the agriculture syllabus is overly extensive compared to the allocated instructional time, creating pressure to cover content superficially. This was severely compounded by a universal resource deficit: all three participating schools lacked basic practical facilities, including suitable farmland, agricultural tools, and sufficient textbooks, fundamentally undermining the subject's practical ethos.

Effects on Teaching and Learning

The negative attitudes directly manifested in behaviors that degrade the educational environment. A significant proportion of students (44.4%) admitted to not paying attention during agriculture lessons. Other observed effects included persistent absenteeism in agriculture days, a tendency to skip lessons, and generally poor class performance (**Table 2**). Low participatory engagement was the least reported effect (8.1%).

These behavioral issues culminate in subpar academic outcomes, as evidenced by the 2021 Malawi school certificate of education results, where over half of the students nationwide scored below 50% in agriculture.

Proposed Intervention Strategies

Participants proposed targeted interventions across four key areas.

For learner-focused strategies (**Table 3**), career sensitization (43.4%) and role model exposure (25.3%) were most frequently recommended.

Teacher-focused strategies (**Table 4**) emphasized improving working conditions (40.4%) and reducing absenteeism (28.3%).

Regarding content and curriculum (**Table 5**), a majority of responses (60.6%) called for content reduction and streamlining.

For resources (**Table 6**), government provision of materials was the dominant solution, comprising 56.6% of responses.

Table 6. Resource-focused intervention strategies

Strategy	n	Percentage (%)	Expected impact
Government resource provision	56	56.6	Adequate teaching materials
Community support and protection of facilities	28	28.3	Local engagement
Administrative resource allocation	7	7.1	School-level support
Teacher resourcefulness development	8	8.0	Creative resource utilization
Total responses	99	100	

DISCUSSION

This study reveals that the formation of negative attitudes toward agricultural education in Phalombe District is not a simple issue of student disinterest, but rather a systemic problem arising from the complex interplay of societal perceptions, institutional failures, and pedagogical shortcomings. The findings both confirm and contextualize the broader challenges documented in the international literature on agricultural education.

The predominance of learner-related factors (57%) underscores the profound impact of deep-seated societal stigma. The characterization of agriculture as low-status manual labor mirrors findings in Nigeria, where students cited poor societal valuation and tedious work as major deterrents (Ahire et al., 2020). This perception is perpetuated by an "exposure gap." Unlike the successful role models shown to enhance motivation (Ikuemonisan et al., 2022), students in Phalombe primarily observe subsistence-level farming, which reinforces the very stereotypes that deter engagement. This aligns with Boye et al. (2024), who identified negative social perceptions as a primary barrier across Africa. Consequently, the proposed interventions for career sensitization and role-model exposure are not merely additive but are essential to disrupting a cyclical narrative.

However, student perceptions are shaped and hardened by the institutional reality. The universal lack of basic resources in all studied schools represents a critical failure to provide the practical learning environment that defines quality agricultural education (Baliyan et al., 2021; Tembo et al., 2023). This finding indicates a more severe resource constraint than reported in some other contexts (Chee & Leong Yong, 2011; Cosby et al., 2022) and creates a vicious cycle: the theoretical, resource-starved delivery confirms students' preconceptions of agriculture as outdated and unengaging, which in turn leads to the poor performance and low priority that justifies continued under-investment (Baliyan et al., 2021; Cosby et al., 2022; Recha et al., 2025; Scott et al., 2023). This resource deficit forces a pedagogical approach that is antithetical to the subject's requirements.

Within this constrained environment, teacher-related challenges become understandable, though not excusable. The high absenteeism and theoretical focus may reflect both a lack of supportive resources and possible capacity gaps, as suggested by the predominance of diploma-level qualifications. This echoes the dissatisfaction expressed by South African agricultural graduates regarding the practical relevance of their training (Maka, 2024). Teachers are operating within a system that fails to equip them with the tools or, in many cases, the advanced pedagogical training needed to deliver effective, practical lessons (Laitinen et al., 2023; Popova et al., 2022; Zatkalík & Bartelt, 2025). The pressure to cover an overly broad curriculum further exacerbates this, pushing teachers towards rote memorization at the expense of the deep, experiential learning that could spark student interest (Kagendo, 2015).

The resultant classroom behaviors, such as the 44.4% inattention rate, are therefore not simply a reflection of student apathy but are predictable outcomes within the study's theoretical framework. The TPB (Ajzen, 1991) explains this well: negative attitudes (e.g., "agriculture is for failures"), subjective norms (e.g., "my family looks down on farming"), and low perceived behavioral control (e.g., "I can't learn without tools") collectively result in weak intentions to engage. Simultaneously, SCT (Bandura, 1986) illustrates how an unsupportive environment (no resources) and a lack of positive observational learning (no role models) systematically undermine students' self-efficacy and motivation to persist. The poor national examination results are the logical culmination of this disengagement.

CONCLUSIONS AND RECOMMENDATIONS

Ultimately, the evidence from this study confirms that agriculture's declining appeal stems from systemic, addressable barriers: career stigmatization, resource constraints, and an overburdened curriculum. While these findings provide important insights, the concentrated geographic scope and cross-sectional design suggest caution in generalizing results across all Malawian contexts or assuming persistent attitudes over time.

These limitations directly inform the recommended path forward. A multi-stakeholder strategy remains crucial, with policymakers piloting curriculum reforms across diverse regions, schools forging local partnerships to broaden student exposure, and future research prioritizing longitudinal studies to properly assess intervention impacts. Ultimately, transforming agricultural education into a dynamic field is essential for engaging Malawian youth and advancing national food security and economic development.

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Ethical statement: This study received institutional permission from the Nalikule College of Education Research Committee and the head teachers of the participating secondary schools. As a minimal-risk educational assessment, it was exempt from full ethical review in accordance with institutional policy. The authors further stated that informed consent was obtained from all adult participants, while student assent and parental consent were secured for minors. All data were anonymized using non-identifiable codes, stored securely in password-protected files accessible only to the research team, and will be retained for five years before secure deletion.

AI statement: The authors stated that Grammarly (an AI-based writing assistant) was used for grammar and language editing. After using the tool, the authors reviewed and edited the content as needed and take full responsibility for the final publication.

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Data sharing statement: Data supporting the findings and conclusions are available upon request from the corresponding author.

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