

Assessing Financial Literacy on Agricultural Education Graduates' Engagement in Ganoderma Mushroom Enterprises in Abia State, Nigeria

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Abstract

The study assessed the influence of financial literacy on Agricultural Education graduates' engagement in Ganoderma mushroom enterprises in Abia state, Nigeria. Specifically, the study determined the influence of financial literacy on Agricultural Education graduates in the planning, production and marketing of Ganoderma mushrooms. It adopted descriptive survey research design. The population for the study was 684 Agricultural Education graduates currently engaged as teachers in Abia state Secondary Education Management Board. A sample size of 135, was drawn from the population, using multi-stage sampling. Instrument for data collection was questionnaire. The instrument was validated by three experts; one each in Agricultural Education, Biology and Entrepreneurship Development from Michael Okpara University of Agriculture, Umudike. Cronbach Alpha method was used to test the reliability of the instrument, and the test yielded a coefficient of 0.73. Data collected were analyzed using mean and standard deviation to answer the research questions raised in the study. The results show among others that, financial literacy to a low extent influenced Agricultural Education graduates in planning and production, but to a high extent in marketing of Ganoderma mushrooms. Based on these findings, it was recommended among others that, Abia state Government should enhance the knowledge and skills of her citizenry in Ganoderma mushroom enterprises through awareness creation and capacity-building programmes.

Keywords: Agricultural Education, Assessing, Enterprises, Financial Literacy, Ganoderma Mushroom

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INTRODUCTION

Agricultural Education is a programme of study involving the teaching and learning of agriculture in formal institutions of learning. It aims at equipping students with knowledge, skills and attitude necessary to serve as a teacher and agriculturalist (Olaitan, 2017). Agricultural Education plays a crucial role in Nigerian economy, providing food security, income to individuals, industrial raw materials, and employment (Egun, 2021). With the increasing emphasis on entrepreneurship and demand for agricultural products, Ganoderma mushroom farming could be an important entrepreneurship venture for Agricultural Education graduates to secure part or full time employment (Afolabi, *et al.*, 2020; Ononogbu & Ariwodo, 2025).

Ganoderma mushroom is an edible fungi that belongs to the genus *Ganoderma*. According to Adeoye *et al.*; (2019), *Ganoderma* mushroom is native to Asia, Africa and South America. It involves the growing of the crop in designated locations or farms, where they can grow as stumps and other decaying woods (Oyetayo & Oyetayo, 2020). *Ganoderma* mushroom cultivation involves the following stages: spawn preparation, substrate preparation, inoculation, incubation and harvesting (Wang, *et al.*, 2020). *Ganoderma* mushroom is known

to boost immune system and improve the overall health (Oyedele, 2022). It is also a nutritious food source: rich in protein, fibre and other important food nutrients (Oyetayo & Oyetayo, 2020). Hence, it is a lucrative enterprise.

An enterprise is an occupation or business initiative with a sense of purpose and direction. Enterprises operate to produce goods and services with the goal of generating profits (Saha, *et al.*, 2022; Onuka *et al.*, 2023). That explains why individuals, including Agricultural Education graduates, aspire to own Ganoderma mushroom enterprises. Agricultural Education graduates learnt courses that equip them with financial knowledge while in the university. Such courses include: Agricultural Economics, Agricultural Extension, Agricultural Marketing, Entrepreneurship Studies and Practical Farming (Department of Agricultural and Vocational Education, 2024; Uka & Oleabhiele, 2025). It is believed that these courses would equip them with financial literacy to enable them manage economic ventures. (Afolabi, *et al.*, 2020).

Finance is money used to run an enterprise, a project or an activity. Financial literacy has to do with the understanding of financial principles and appropriate behaviours that enable individuals to succeed in businesses or careers (Agu, *et al.*; 2017; Ogundari & Ojo, 2020). Acquisition of financial literacy can keep entrepreneurs abreast of financial standing of their enterprises as well as help them to make informed decisions about financial matters (Kolawole *et al.*, 2018). Financial literacy can influence the planning, production and marketing of Ganoderma mushrooms. In planning, it can help entrepreneurs to make realistic budget, save funds for investments, prepare financial projections and mitigate financial risks in Ganoderma mushroom enterprise (Oyedele, 2022). Those who plan well could succeed to a great extent in their enterprises, while those that fail, may not achieve much. On production, Kagan *et al.*; (2017), opined that financially literate graduates can provide financial information to determine production costs, manage income and expenses, allocate resources to various units of production efficiently, and avoid financial pitfalls such as fraud (Afolabi *et al.*, 2020). Also, Agu, *et al.* (2017) opined that, possessing adequate financial literacy could help prospective entrepreneurs to decide on pricing and marketing strategies to adopt, as well as make market budgets. Financial literacy also influences entrepreneurs to adopt various methods to boost sales of Ganoderma mushrooms (Ekumankama *et al.*, 2017). In spite of the positive influence of financial literacy on the engagement of Agricultural Education graduates in Ganoderma mushroom enterprises, the extent of the influence is not known. It is on this note that this study sought to assess the extent to which financial literacy influence the engagement of Agricultural Education graduates in Ganoderma mushroom enterprises.

The assessment of the extent of Agricultural Education graduates' engagement in Ganoderma enterprise entails estimating the level at which these graduates participate in the planning, production and marketing of Ganoderma mushrooms. By these assessments, the study sought to provide insights into frameworks for enhancing their financial literacy in Ganoderma mushroom enterprises in the state. Among the frameworks are integrating financial literacy into the curriculum of Agricultural Education, use of case studies of successful entrepreneurs to teach financial literacy, and provision of financial assistance to prospective Ganoderma mushroom farmers (Kagan *et al.*, 2017). However, there is hardly any data on financial literacy levels of Agricultural Education graduates in Abia state. It is in the light of this background that the study was carried out to assess the extent to which financial literacy influence Agricultural graduates' engagement in Ganoderma mushroom enterprises in Abia state, Nigeria. This is the gap the study has filled.

Purpose of the Study

The general purpose of the study was to assess the extent to which financial literacy influences the engagement of Agricultural Education graduates in Ganoderma mushroom enterprises in Abia state, Nigeria. Specifically, the study determined the extent to which financial literacy influence the:

1. Planning of Ganoderma mushroom enterprises in Abia state,
2. Production of Ganoderma mushroom in Abia state, and
3. Marketing of Ganoderma mushroom and products in Abia state.
4. It also, determined frameworks for enhancing the acquisition of financial literacy skills among Agricultural Education graduates in Abia state.

Research Questions

The following research questions guided the study:

1. To what extent does financial literacy influence Agricultural Education graduates in the planning of Ganoderma mushroom enterprises in Abia state?
2. To what extent does financial literacy influence Agricultural Education graduates in the production of Ganoderma mushroom enterprises in Abia state?
3. To what extent does financial literacy influence Agricultural Education graduates in the marketing of Ganoderma mushroom and products in Abia state?
4. What are the frameworks for enhancing the acquisition of financial literacy skills of Agricultural Education graduates in Abia state?

METHODOLOGY

The study adopted a descriptive survey research design. The area of the study is Abia State, Nigeria; which is one of the 36 states in Nigeria. The choice of the area was premised on the fact that entrepreneurs, including Agricultural Education graduates, engage in Ganoderma mushroom enterprises, but the extent to which their financial literacy influence them in the running of their enterprises is in doubt. The population for the study was 684 Agricultural Education graduates currently engaged as teachers in Abia state Secondary Education Management Board. A sample size of 135, was drawn from the population in the state, using multi-stage sampling. First stage involved random sampling of Umuahia Education Zone out of the existing three (Aba, Ohafia and Umuahia) Education Zones in the state. In the second stage, two Local Governments Areas (LGA), Umuahia North and Ikwuano, were randomly selected from the four LGAs in Umuahia Education Zone. The third stage involved selection of all 135 Agricultural Education graduates from the two selected LGAs.

A 27-item researcher-developed questionnaire titled: Influence of Financial Literacy on Agricultural Education Graduates' Engagement in Ganoderma Mushrooms Enterprise Questionnaire (IFLAEGMEQ) was used for data collection. It consists of sections A, B, C, D and E. Section A was used to provide information on the personal characteristics of the Agricultural Education graduates, while sections B, C, D and E were developed into questionnaire items to provide answers to research questions 1, 2, 3 and 4. The questionnaire was validated by three experts; one each in Agricultural Education, Biology and Entrepreneurship Development in Michael Okpara University of Agriculture, Umudike. Cronbach Alpha method was used to test the reliability of the instrument, and the test yielded a coefficient of 0.73.

A total of 135 copies of the questionnaire were administered and retrieved on completion by the researcher and three research assistants. Data collected were analyzed using mean and standard deviation to answer the research questions. Each item in section B, C and D has a four point response scale of Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Level (VLE), with corresponding value 4, 3, 2 and 1, while each item in section E has a four point response scale of Strongly Agree (SA), Agree (A), Disagree (D) SD (SD), with corresponding value 4, 3, 2 and 1.

Decisions made on cut-off point for research questions 1, 2, and 3, were guided with the real limit of numbers range of 3.50-4.00-Very High Extent, 2.50-3.49 -High Extent, 1.50-2.49-Low Extent, while 0.50-1.49 is Very Low Extent. However, decision on research 4, was based on mean value of 2.50 and above. Any item with mean value 2.50 or above was regarded as agreed, while any item below 2.50 was disagreed.

RESULTS

Research Question 1:

To what extent does financial Literacy influence Agricultural Education graduates in the planning of Ganoderma mushroom enterprises in Abia state?

Mean Responses of Respondents on the extent financial Literacy influence Agricultural Education graduates in planning of Ganoderma mushroom enterprises in Abia state (N=135)

SN	Items on Financial literacy influence on Planning	\bar{X}_2	SD ₂	Remarks
Financial literacy influence graduates to:				
1.	Set goals for profitable Ganoderma enterprises.	2.16	0.62	Low Extent
2.	Select suitable location for Ganoderma mushroom enterprise.	1.43	0.82	Low Extent
3.	Identify and mitigate financial risks in Ganoderma mushroom enterprises.	1.66	0.73	Low Extent
4.	Utilize loans and grants for Ganoderma mushroom enterprise effectively.	1.84	0.54	Low Extent
5.	Select competent personnel to assist in Ganoderma mushroom production.	2.14	0.72	Low Extent
6.	Use financial indices to forecast profits or losses in the enterprise.	2.33	0.78	Low Extent
7.	Determine appropriate season for planting and harvesting Ganoderma mushrooms for maximum profit.	1.72	0.67	Low Extent
8.	Budget for the identified Ganoderma mushroom production activities as appropriate.	2.01	0.69	Low Extent
Grand total		1.91	0.70	Low Extent

\bar{X}_1 =Mean of Agricultural Education Graduates; SD= standard deviation of Agricultural Education graduates, N=Number of Respondents.

Data in Table 1 reveals that the mean responses in all the items (1-8) ranged between 1.43 and 2.16, which fall within the real limit of numbers range of 1.50 to 2.49. This means that the respondents indicated a low extent mean responses. The grand mean of 1.91, which also falls within the real limit range 1.50 and 2.49 affirmed that Agricultural Education graduates agree that financial literacy to a low extent, influences their planning of Ganoderma mushroom enterprises. The grand standard deviation of 0.70 implies that the responses of the respondents are close to the mean and each other.

Research Question 2

To what extent does financial Literacy influence Agricultural Education graduates in the production of Ganoderma mushroom enterprises in Abia state?

Table 2: Mean Responses of Respondents on the extent to which financial literacy influence Agricultural Education students in the production of Ganoderma mushroom in Abia state (N=135)

SN	Items on influence of financial literacy on production	\bar{X}	SD	Remarks
Financial literacy influence on graduates to:				
9	Budget for various aspects or units of Ganoderma mushroom production.	2.27	0.41	Low Extent
10	Monitor and control production costs of Ganoderma enterprise.	2.31	0.45	Low Extent
11	Provide information to add value to Ganoderma mushroom production.	2.13	0.73	Low Extent
12	Secure loan or grant for Ganoderma mushroom production.	3.21	0.52	High Extent
13	Determine the cost of pests and disease control of Ganoderma mushroom.	2.38	0.55	Low Extent
14	Determine cost of storing Ganoderma mushrooms and products.	1.57	0.4	Low Extent
15	Avoid financial pitfalls that can increase cost of Ganoderma mushrooms production.	1.86	0.65	Low Extent
Grand Total		2.25	0.53	Low Extent

Key: \bar{X} = Mean of Agricultural Education graduates, SD = Standard Deviation of Agricultural Education graduates, N = Number of Respondents.

Data in Table 2 shows that the mean responses in items 10, 11, 12, 14, 15, and 16 ranged between 1.57 and 2.38, which fall within the real limit of numbers range of 1.50 to 2.49. These indicate a low extent mean responses. The Table also shows that the mean responses in item 13, fall within the real number range 2.50 to 3.49. This means that the respondents indicate a high extent mean responses. The grand mean of 2.25 which also falls within the real limit range 1.50 and 2.49 affirmed that Agricultural Education graduates agree that financial literacy to a low extent influence their Ganoderma mushroom production. The grand standard deviation of 0.53 implies that the responses of the respondents are close to the mean and each other.

Research Question 3

To what extent does financial literacy influence Agricultural Education graduates in marketing of Ganoderma mushroom and products in Abia state?

Table 3: Mean Responses of Respondents on the extent to which financial literacy influence Agricultural Education graduates in the marketing of Ganoderma mushroom in Abia state (N=135)

SN	Items on Financial literacy influence on marketing	\bar{X}_1	SD ₁	Remarks
Financial literacy influences graduates to:				
16	Determine prices of Ganoderma mushroom products.	3.35	0.80	High Extent
17	Use community programmes or festivals to increase sales of Ganoderma mushrooms.	3.88	0.56	High Extent
18	Adopt direct-to-customers strategy to sell mushrooms.	3.73	0.75	High
19	Collaborate with local supermarkets and restaurants to expand market reach.	3.83	0.54	High
20	Adopt subscription method to boost sales of Ganoderma mushrooms.	3.67	0.63	High Extent
21	Promote healthy growth practices to attract health conscious customers.	3.42	0.43	High Extent
Grand Total		3.65	0.62	High extent

Key: \bar{X} = Mean of Agricultural Education graduates, SD = Standard Deviation of Agricultural Education graduates, N = Number of Respondents.

Table 3 reveals that the mean values of all the items (16-21) ranged between 3.42 and 3.88 which were within the real limit of the number range 2.50-3.49. This is a high extent response. It means that the respondents agreed that possession of financial literacy influence Agricultural Education graduates' production of Ganoderma mushroom to a high extent. The grand mean of 3.65 which also falls within the real limit range 2.50 and 3.49 affirmed that possession of financial literacy influences Agricultural Education graduates in marketing of Ganoderma mushroom to a high extent in Abia state. The grand standard deviation of 0.62 means that the respondents were not far from the mean and from the opinions of one another in their responses.

Research Question 4

What are the frameworks for enhancing the acquisition of financial literacy among Agricultural Education graduates in Abia state?

Table 4: Mean Responses of Respondents on frameworks for enhancing the acquisition of financial literacy of Agricultural Education graduates in Abia state (N=135)

SN	Frameworks for acquisition of financial literacy	\bar{X}_2	SD ₂	Remarks
22	Frameworks for enhancing acquisition of financial literacy include: Integrating financial literacy into Agricultural Education curriculum.	3.26	0.70	Agree
23	Organize training programmes on financial management concepts.	3.36	0.68	Agree
24	Use experienced entrepreneurs to mentor prospective Ganoderma mushroom farmers.	3.50	0.50	Agree
25	Learning financial management from experienced Ganoderma mushroom entrepreneurs.	3.68	0.51	Agree
26	Establish young farmers club for students meet regularly to discuss financial matters.	3.28	0.48	Agree
27	Invite financial experts to deliver guest lectures on Ganoderma mushroom production enterprises.	3.37	0.64	Agree
Grand Total		3.40	0.59	Agree

Key: \bar{X} = Mean of Agricultural Education graduates, SD = Standard Deviation of Agricultural Education graduates, N = Number of Respondents.

Table 4 shows that all the six items (22-27) obtained mean scores that are above the cut-off point ≥ 2.50 . This means that the six items are all framework for enhancing the acquisition of financial Literacy among Agricultural Education graduates for success in Ganoderma mushroom enterprises in Abia state. The grand mean of 3.40 which is above the cut-off point of 2.50, affirmed that they are framework for enhancing the acquisition of financial Literacy among Agricultural Education graduates for success in Ganoderma mushroom enterprises. The grand standard deviation of 0.59 means that the respondents were not far from the mean and from the opinions of one another in their responses.

Discussion of Findings

The result of the study in Table 1, reveals that Agricultural Education graduates agreed that acquisition of financial literacy influences their planning of Ganoderma mushroom enterprises to a low extent. This implies that financial literacy influenced them to a low extent in their planning of Ganoderma mushrooms as: they set goals for profitable Ganoderma enterprises, select suitable location for Ganoderma mushroom enterprise, identify and mitigate financial risks in Ganoderma mushroom enterprises, among others. The result agreed with Oyedele (2022) who opined that financial literacy can help entrepreneurs to make realistic budget, save funds for investments, prepare financial projections and mitigate financial risks

in Ganoderma mushroom enterprise. The result also support Kolawole, et al, (2023), who concluded that those that plan well tend to realize the objectives of their enterprises to a great extent, while those do not plan well may not achieve much.

The result in Table 2 disclosed that Agricultural Education graduates agreed that acquisition of financial literacy influences their production of Ganoderma mushroom enterprises to a low extent. The result implied that financial literacy influenced Agricultural Education graduates to a low extent when: they made budget for various aspects or units of Ganoderma mushroom production, monitor and control production costs of Ganoderma enterprise, provide information to add value to Ganoderma mushroom production, secure loan or grant for Ganoderma mushroom production, and determine the cost of pests and disease control of Ganoderma mushroom. This result agrees with Kagan *et al*; (2017), who noted that financially literacy can provide financial information to determine the production costs and expenses. The result also agrees with Afolabi et al., (2020), Akinyooye et al.,(2021) who said that financial literacy skills enable individuals to create wealth and avoid financial pitfalls such as fraud (Afolabi et al., 2020).

The result in Table 3 indicates that Agricultural Education graduates agreed that financial literacy influenced their marketing of Ganoderma mushroom to a high extent. They specifically agreed that financial literacy to a high extent influenced them: when they determine prices of Ganoderma mushroom products, use community programmes or festivals to increase sales of Ganoderma mushrooms, adopt direct-to-customers strategy to sell mushrooms, collaborate with local supermarkets and restaurants to expand market reach, among others. These results agree with Agu, *et al* (2017) who said that, possessing financial literacy could help prospective entrepreneurs to decide on pricing and marketing strategies to adopt. The results also confirms the submission of Ekumankama *et al.*,(2017), that financial literacy influences entrepreneurs to adopt various methods to boost sales of Ganoderma mushrooms. This is also similar to the findings of Ojo and Omoregie (2016) where literacy level was a factor for the occupational health and safety competencies of workers in the construction industry.

The result in Table 4 indicates frameworks for enhancing the acquisition of financial literacy of Agricultural Education students in Abia state. They specifically, include integrating financial literacy into Agricultural Education curriculum, organizing training programmes on financial management concepts, use experienced entrepreneurs to mentor prospective Ganoderma mushroom farmers, learning financial management from experienced of Ganoderma mushroom entrepreneurs, and establish young farmers club for students to meet regularly to discuss financial matters.

CONCLUSION

The study was specifically, carried out to determine the extent to which financial literacy influences Agricultural Education graduates in planning, production, and marketing of Ganoderma mushroom and products in Abia. The study therefore, established that acquisition of financial literacy influences Agricultural Education graduates' engagement in Ganoderma mushroom enterprises to a low extent in planning and production. It also established that financial literacy influences Agricultural Education graduates' engagement in the marketing of Ganoderma mushroom enterprises to a high extent.

The study had, therefore, made a number of contributions to knowledge. It has provided information on the subject, which were not available, but were required for effective

Ganoderma mushroom enterprises. The information provided by the study is bound to help in achieving food security and poverty reduction in Abia State.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made by the researcher:

1. Abia state Government should organize training workshops for prospective entrepreneurs to increase their financial literacy in Ganoderma enterprises.
2. Government should also enhance the financial literacy skills of prospective entrepreneurs offering them scholarship to undertake formal educational programme in institution of learning.
3. Communities should adopt various strategies, including town meetings to educate their people about the importance of financial literacy in Ganoderma mushrooms enterprises.
4. Ministry of Education should integrating financial literacy into Agricultural Education curriculum in Senior Secondary Schools in the state.

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