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Evaluation Of Philosophy, Objectives And Curriculum Contents Of The Farmer Field School Programme In Agricultural Extension Education In Yobe State, Nigeria

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ABSTRACT

The study evaluated of farmer field school programme in agricultural extension education in Yobe State, Nigeria. Two specific objectives and two null hypotheses guided the study. Evaluation research design was used for the study. The population of the study was 3,952 and proportionate sampling technique and census population technique were used to derive 536 sample size for the study. Structured questionnaire and observation schedule were used for data collection. The instruments were validated by three experts, two from Abubakar Tafawa Balewa University Bauchi and one from Federal University Kashere, Gombe State. The reliability coefficient of the research instrument stood at 0.87. Three research assistants helped in the data collection. Mean and Standard deviation were used in the data analysis. One way analysis of variance (ANOVA) was used to test the null hypotheses 1 – 2 at a 0.05 level of significance. Statistical Package for Social Science (SPSS) Version 25 was employed to run the analysis. The findings of the study revealed that respondents expressed agreement with the philosophy and objectives of the FFS programme in Yobe State, Nigeria. Additionally, there was no statistically significant difference in the mean responses of participants based on their location regarding the appropriate FFS programme's

philosophy and objectives. It further revealed that respondents agreed with the suitability of the FFS curriculum contents in Yobe State and was effectively implemented. Facilitators' responses regarding curriculum contents showed no statistically significant difference based on location. Notably, the lack of statistically significant differences in responses based on location underscores a uniformity of views and experiences among participants and facilitators throughout Yobe State. The study further recommended that, the policy makers should continuously review and update the appropriate curriculum contents to ensure they remain relevant and adaptable to the changing agricultural landscape, incorporating emerging technologies and practices that promote sustainability and resilience among participants and facilitators.

Keywords: Evaluation, Philosophy, Objectives, Curriculum Contents, Farmer Field School Programme, Agricultural Extension Education.

INTRODUCTION

Evaluation of Farmer Field School (FFS) programme in agricultural extension education is a process that critically examine a programme. It involves collecting and analyzing information about a FFS programme's activities, characteristics and outcomes. The purpose of evaluation in FFS programme is to make judgments about a programme, to improve its effectiveness, and to inform programming decisions (Lopez, Operti & Carlos, 2017). According to Dike (2016), evaluation of FFS programme is a qualitative measure of the prevailing situation, which calls for evidence, effectiveness, suitability or goodness of the programme. Evaluation of FFS programme in agricultural extension education adds the ingredient of value judgment to assessment. It is concerned with the application of its findings and implies some judgment of the effectiveness, social utility and desirability of a product, process or progress in terms of carefully defined and agreed upon objectives or values. Evaluation of FFS programme has a wider meaning which goes beyond measurement and making judgment in the FFS. FFS is a "school without walls" that teaches basic agro-ecology and management skills that make farmers experts in their own farms. FFS programme composed groups of farmers who meet regularly during the course of the growing seasons to carry out experiment as a group with new production options (Yusuf, Hussaini, Mele, Sani & Abdullahi, 2021). These authors further affirmed that, typical FFS groups have 25-30 farmers. After the training period, farmers continue to meet and share information, with less contact with extensionist (Arokoyo & Auta, 2018). These authors maintained that, it is a participatory method of technology development and dissemination, based on adult learning principles and experimental learning. It reflects the four elements of experiential learning cycle, namely: concrete experience, observation and reflection, generalization and abstract conceptualization and active experimentation (Ayi & Undiandeye, 2022). FFS programme have been established in Yobe State, Nigeria, with hundreds of farmers participating. For example, over one hundred and twenty (120) FFS have been successfully implemented in Yobe State (Food and Agricultural Organization, FAO, 2016a). From field studies carried by the researcher and literatures revealed that there are one hundred and fifty two (152) FFS established in the study area (International Fund for Agricultural Development, IFAD, 2018; Yobe State Agricultural Development Programme, YOSADP, 2018).

The research gap that this study intend to fill was that, the related literature and empirical studies that were reviewed in this study on FFS programme were mostly found to be on variables in the FFS programme such as philosophy, objectives and curriculum contents in the FFS programme of agricultural extension education in Yobe State, Nigeria among others. But none was found to have reviewed and combined these two (2) research variables in the FFS programme in a singly study with participants (farmers) and facilitators as population of the study. Furthermore, according to related literature and empirical studies so far reviewed, it evidently shown that a study gap exist that the current study was set to empirically fill. Thus, the study was set up to fill this existing research gap by determining the Evaluation of Philosophy, Objectives and Curriculum Contents of the Farmer Field School Programme in Agricultural Extension Education in Yobe State, Nigeria.

The evaluation of FFS programme in agricultural extension education would dwelled on the following specific objectives: appropriate philosophy, objectives and suitability of curriculum contents in the FFS

programme respectively. The problem statement in the FFS programme of agricultural extension education hinged in the areas of approaches, facilitators, number of farmers reached (participants) and coordination respectively. The curricular and learning methods in the FFS programme are weakly designed or practiced. A clear strategy for monitoring, evaluation and indicators to measure progress are inadequate (FAO, 2016b; Berg & Jiggins, 2017). These authors further affirmed that, the success in the FFS programme depend on the availability of competent facilitators. However, skilled and experienced facilitators are scarce and it is difficult to retain and engage trainers without some form of incentives. Therefore, it was on this light, that the current study would evaluate the Philosophy, Objectives and Curriculum Contents of the Farmer Field School Programme in Agricultural Extension Education in Yobe State, Nigeria.

Purpose of the Study

The study was aimed to evaluate the Farmer Field School Programme in Agricultural Extension Education in Yobe State, Nigeria. Specifically, the study achieved the following objectives:

- i. Determine the appropriateness of the philosophy and objectives toward the implementation of the FFS programme in agricultural extension education in Yobe State, Nigeria.
- ii. Assess the suitability of the curriculum contents toward the implementation of the FFS programme in agricultural extension education in Yobe State, Nigeria.

Research Hypotheses

The following null hypotheses were formulated and tested at 0.05 alpha level of significance:

- H₀₁:** There is no significant difference in the mean responses of participants based on their location regarding the appropriateness of the philosophy and objectives toward the implementation of the FFS programme in agricultural extension education in Yobe State, Nigeria.
- H₀₂:** There is no significant difference in the mean responses of facilitators based on their location regarding the suitability of the curriculum contents toward the implementation of the FFS programme in agricultural extension education in Yobe State, Nigeria.

Theoretical Framework

This study was based on Context, Input, Process and Product (CIPP) evaluation model developed by Stufflebeam (1971). The CIPP evaluation model is a framework for guiding evaluations of programmes, projects, personnel, products, institutions and evaluation systems (Lopez, Operti & Carlos, 2017; Stufflebeam & Zhang, 2017). In this decision-oriented programme, programme evaluation was defined as the “systematic collection of information about the activities, characteristics, and outcomes of programmes to make judgments about the programme, improve programme effectiveness, and or inform decisions about future programming” (Stufflebeam and Zhang, 2017).

Why the researcher chooses CIPP evaluation model? Because it was created for the decision making toward programme improvement. The CIPP model was implemented for the purpose of quality evaluation at schools like FFS Programme. The Advantages credited to CIPP evaluation model was that, it can be used for both types of evaluation (summative and formative). The most important thing about this model is that, it provide the holistic view of every elements by evaluating context, input, process and product (output) from each and every angle (Stufflebeam & Zhang, 2017; Lopez, Operti & Carlos, 2017).

Above all the CIPP model was aimed at providing an analytical and rational basis for programme decision-making, based on the cycle of planning, structuring, implementing, reviewing and revising decisions and each is examine through a different aspect of evaluation such as context, input, process and product evaluation. Furthermore, the core value of this evaluation model was on the four concepts of context, input, process and product evaluation with the intention of not to prove but rather improve the programme itself like FFS programme (Stufflebeam & Zhang, 2017)). Therefore, from the aforementioned standards, this model was considered appropriate to evaluate the Farmer Field School Programme in Agricultura Extension Education in Yobe State, Nigeria.

The relationship between CIPP evaluation model with the current study was that, the methodological basis of the FFS programme was borrowed from several educational concepts of this great evaluation

model, namely the appropriate philosophy, objectives and suitability of curriculum contents formed the contents of the model. Furthermore, the research variables that formed the specific objectives of this study were originated from the core values of CIPP evaluation model. On a last note, the research framework was equally constructed based on the core values of Stufflebeam (1971) great evaluation model respectively.

The research framework shows at a glance the inter-related variables in the study and it was used in illustrating the various stages and processes that eventually climax into evaluation and implementation of the FFS programme in agricultural extension education. The figure below revealed the illustration of the research framework at a glance.

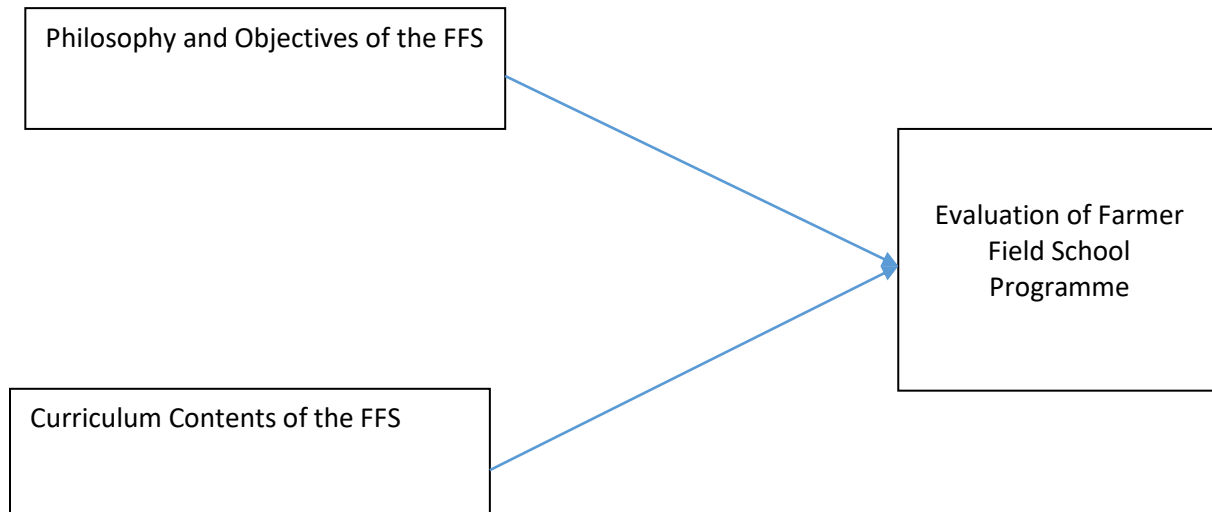


Figure 1: Research Framework on FFS Programme in Agricultural Extension Education.

Source: Developed by the researchers (2024).

The research framework was built on the CIPP model of programme evaluation as introduced by Stufflebeam (1971). The model was based on the context, input, process and product with a holistic view of every elements and by evaluating them from each and every angle. Adapting and using the CIPP model in evaluating FFS programme in agricultural extension education based on interrelationship between the two (2) research variables in the FFS programme. These interrelated variables includes; appropriate philosophy, objectives and suitability of curriculum contents of the FFS programme in agricultural extension education.

The aim of the FFS programme was to explain the series of research variables that can be used to determine the acceptance and utility of FFS programme in the agricultural extension education in Yobe State, Nigeria. Muhammad (2015), Nyamonge (2016) and Berg and Jiggins (2017) point out and vividly explain the criteria for evaluating the FFS programme in agricultural extension education into two (2), namely;

- (i) Appropriate philosophy and objectives of the FFS programme
- (ii) Suitability of curriculum contents of the FFS programme

Berg and Jiggins (2017) opined that the proper combination and utility of the above-mentioned research variables would lead to implementation of the FFS programme in agricultural extension education and hence improving the participants' knowledge level and agricultural productivity.

METHODOLOGY

The methodology of the study were presented as follows:

Research Design

Evaluation Research Design (ERD) was used for the study. ERD is a type of research that entails carrying out a structured assessment of the value of resources committed to a programme or specific goal. It often adopts social research methods to gather and analyze useful information about organizational processes and products

Population and Sampling Procedure

The population of the study was 3,952 farmers (participants) and facilitators (3,800 farmers/participants and 152 facilitators) from the FFS programme in agricultural extension education in all the seventeen (17) LGAs of Yobe State, Nigeria. Krejcie and Morgan (1970) table for determining sample size was used to obtain combined samples, 384 participants and 152 facilitators resulted to 536 respondents.

Measurement Scale

A structured questionnaire, observation schedule, checklist and performance work sample test were used as instruments for data collection. The structured questionnaire consists of close ended questions on appropriate philosophy and objectives of the FFS programme. The structured questionnaire was named: Farmer Field School Questionnaire (FFSQ). The FFSQ was having 5 points Modified Likerts Rating Scale of Strongly Agree (SA) = 5, Agree (A) = 4, Moderately Agree (MA) = 3, Disagree (D) = 2 and Strongly Disagree (SD) = 1.

Observation Schedule (OS) was also used as instrument for data collection and dwell on curriculum contents, competences of facilitators, pedagogical approaches and evaluation techniques employed in the FFS programme. It consists items on four research variables with 13 items on the curriculum contents, 11 items on the competences of facilitators, 10 items on the appropriate pedagogical approaches and 11 items on evaluation techniques employed in the FFS programme. This instrument was named: Farmer Field School Observation Schedule (FFSOS). It consists of a 5 points numerical rating scale as follows: Very Often (VO) = 5, Often (O) = 4, Sometimes (S) = 3, Rarely (R) = 2 and Never (N) = 1.

Data Collection Procedure

The direct contact was used for the data collection by the researchers with three trained research assistants using face to face delivery method. The approach was considered appropriate because it enabled the researchers to thoroughly explain the purpose, importance and confidentiality of all information to the respondents. Anas, Adamu and Bala (2020) opined that, the direct approach has the advantage of retrieving a higher percentage of completed copies of the questionnaire. Based on the outlined advantages, the direct approach was considered appropriate for this study. The data collection exercise lasted for six weeks.

Method of Data Analysis

The data collected was analyzed using SPSS (version 25). The statistical tools that were used to analyze the data were: mean, standard deviation and One-way Analysis of Variance (ANOVA). Mean and standard deviation were used to answer the research questions 1-7 respectively. Nwighor and Obilor (2018) affirmed that, mean and standard deviation was used because they have the greatest reliability and accuracy in analyzing data than any other measures of central tendency and dispersion.

Above all, One-way Analysis of Variance (ANOVA) was used to test the null hypotheses 1-2 formulated at 0.05 Alpha level of significance. According to Mehta (2023) One-way analysis of variance (ANOVA) was used to compare the means of two or more independent groups in order to determine whether there was statistical evidence that the associated population means are significantly different. One-way analysis of variance (ANOVA) is a parametric test. This test is also known as one-factor ANOVA (Mehta, 2023).

RESULTS

The results of the test of Null hypotheses were presented as follows:

Null hypothesis one

There is no significant difference in the mean responses of participants based on their location regarding the appropriateness of the philosophy and objectives toward the implementation of the FFS programme in agricultural extension education in Yobe State, Nigeria.

The Analysis of Variance in Table 1 revealed that there is no statistically significant difference in the mean response of participants based on their location regarding the appropriate philosophy and objectives of the FFS programme in agricultural extension education in Yobe State, Nigeria. $F(2, 379) = 1.319, p = .269$ and $df = 2, 379$. Consequently, Null hypothesis one was accepted. This finding implies that participants, regardless of their location, share similar views and understanding of the philosophy and objectives of the FFS programme in agricultural extension education in Yobe State, Nigeria. It suggests that the programme's core principles and goals are communicated and understood consistently across different locations towards implementation of the FFS programme in Yobe State, Nigeria.

Table 1: One-way Analysis of Variance for Mean Difference of Participants Based on their Location Regarding the Philosophy and Objectives toward Implementation of the FFS Programme

	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Between Groups	.704	2	.352	1.319	.269	Accepted
Within Groups	101.094	379	.267			
Total	101.798	381				

Source: Field study (2024). **Sig.** at 0.05 level.

Null hypothesis two

There is no significant difference in the mean responses of facilitators based on their location regarding the suitability of the curriculum contents toward the implementation of the FFS programme in agricultural extension education in Yobe State, Nigeria.

The Analysis of Variance in Table 2 shows no statistically significant difference in the mean responses of facilitators based on their location regarding the curriculum contents in the FFS programme in agricultural extension education in Yobe State, Nigeria, $F(2, 147) = 2.449, p = .089$ and $df = 2, 147$. Therefore, Null hypothesis two was accepted. This indicates that, regardless of location, facilitators of FFS programme in agricultural extension education in Yobe State, Nigeria have similar views on the curriculum contents of the FFS programme, suggesting that geographical location does not affect their opinions on the curriculum contents toward the implementation of the FFS programme in agricultural extension education in Yobe State, Nigeria.

Table 2: One-way Analysis of Variance on the Mean Difference of Facilitators Based on their Location Regarding the Curriculum Contents toward the implementation of the FFS Programme

	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Between Groups	2.747	2	1.374	2.449	.089	Accepted
Within Groups	119.472	147	.561			
Total	122.219	149				

Source: Field study (2024). **Sig.** at 0.05 level.

CONCLUSION

This research study has shed light on the Evaluation of Farmer Field School Programme in Agricultural Extension Education in Yobe State, Nigeria. The findings revealed that participants and facilitators largely agreed on the appropriate philosophy, objectives and suitable curriculum contents of the FFS

programme, which effectively emphasizes sustainability and addresses local agricultural challenges. Notably, the lack of statistically significant differences in responses based on location underscores a uniformity of views and experiences among participants and facilitators throughout Yobe State.

RECOMMENDATIONS

Based on the findings of the study on Evaluating the Farmer Field School (FFS) Programme in Agricultural Extension Education in Yobe State, Nigeria, the following recommendations were proposed:

- i. There should be regularly assess and refine the appropriate philosophy and objectives toward the implementation of the FFS programme to ensure they effectively capture the participants learning and programme impact. Incorporate feedback mechanisms to allow participants to voice their opinions on the appropriate philosophy and objectives.
- ii. The policy makers should continuously review and update the appropriate curriculum contents to ensure they remain relevant and adaptable to the changing agricultural landscape, incorporating emerging technologies and practices that promote sustainability and resilience among participants and facilitators.

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