EFFECTIVENESS OF HOME GROWN SCHOOL FEEDING PROGRAMME ON RURAL PUPILS EDUCATION PERFORMANCE IN IMO STATE, NIGERIA.

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ABSTRACT
The study examined the effectiveness of Home Grown School Feeding Programme in Imo State, Nigeria. Purposive sampling technique was used to select 120 respondents for the study. Interview schedules were prepared and used to solicit information on the subject matter. Data collected were analyzed with descriptive statistics and multiple regression analysis. The result showed that the mean score effectiveness was 1.99 implying that the programme was not effective. The result also revealed that the respondents had mean perception (ẋ = 3.37) of the programme. Result further showed that respondents had mean satisfactory of (ẋ = 2.74) derived from the programme. The beneficiaries had mean performance (ẋ = 2.82). The major constraints to effectiveness of the programme were corruption (ẋ = 2.83) leadership failure (ẋ = 2.79). Government attitude about the programme (ẋ = 71) lack of prompt release of funds (ẋ = 2.67) change of administration (ẋ = 2.63) and failure on the part of host communities (ẋ = 2.58). The multiple regression analysis result showed that health status (2.93^{xxx}) intelligent queint (2.00^{xx}) retention and completion (2.97^{xxx}), environment/sanitation (2.98^{xx}), continuous assessment (1.10^{x}), absenteeism (-1.47^{x}) and attendance (-0.04) influenced beneficiaries performances in the academics. The study recommended that Effectiveness of the programme is advocated to encourage rural pupils participation in education.

Keywords: Effectiveness, HGSFP Rural, Pupils; Performance Academics.

INTRODUCTION

The major concern of the Federal Government of Nigeria is how to tackle the problem of increasing rate of illiteracy as a result of high level of school dropouts in the country. Different regions in Nigeria have designed and implemented several educational programmes to enhance the rate of literacy of the teeming rural population through education for all (FME, 2017). In the past, successive governments and individuals through private initiatives as well as international organizations embarked on several programmes targeted at mass literacy. Some of these programmes had good objectives but due to some constraints such as wrong approaches and strategies used the issue of alarming rate of school dropout continues to affect the rural areas.

However, many children in less developed nations, Nigeria inclusive suffer from poor health and nutritional problems that affect negatively on their enrolment to and participation in education (Orodho, 2014, United Nations, 2017), Ndu (2015) lamented that hunger can impede the ability of children to learn and develop as healthy and productive adults. Eze (2017) asserted that the interaction between hunger, poor nutrient status and disease prevent children from going to school (Mouse, 2016) World Health Organization (2015) stated that programmes that well increase children's health status will improve their education performances.

One of the avenues to enhance the health and education of children is the Home Grown School Feeding Programme (HGSFP). One cardinal aim of the school feeding programme is to feed primary school pupil's on a meal a day for all public primary school yearly. The programme aims at effecting the right to food, right to education and right to freedom from disease or right to health. The programme was designed to reduce under nourishment, promote school enrolment and retention in "Basic Education Schools" as well as promote personal and environmental hygiene of the school children (World Health Organization, 2017, UNICEF, 2021). Despite the laudable objectives of the programme a lot of challenges has affect

ed the positive benefits of the programme. It is not certain whether there is any empirical evidence on the effectiveness of school feeding programme of primary school children in the state. It is against is backdrop the paper was undertaken to examine the effectiveness of school feeding programme of primary school children in Imo State, Nigeria.

The specific objectives are to:

i) ascertain rural children perception about the programme received.
ii) examine the effectiveness of the programme in Imo State.

iii) determine perceived satisfaction derived from the school feeding programme by rural children.
iv) determine the performance of rural children in the programme.
v) identify the constraints to effective HGSFPs in Imo State.
vi) determine the factors influencing the performance of rural children beneficiaries in the programme.

METHODOLOGY

The study was conducted in Imo State, Imo State has 27 Local Government Areas and also comprises of three agricultural zones. These zones are Owerri, Okigwe and Orlu. There are also three urban areas: Owerri, Okigwe and Orlu.

Three urban areas were purposely selected. Another three rural areas – Ezinihitte Mbaise, Njaba and Obowo L.G.As were randomly selected.

In each of these six L.G.As, a list of community primary schools were drawn-up. For each L.G.A, one community primary school was purposely selected. Thus the study was conducted in three – urban primary schools Nekede (Owerri-West L.G.A), Ubahu (Okigwe L.G.A) and Amaifeke (Orlu L.G.A) and for the rural community primary schools – Chokonezete (Ezinihitte Mbaise L.G.A), Umuaka (Njaba L.G.A) and Umunologho (Obowo L.G.A).

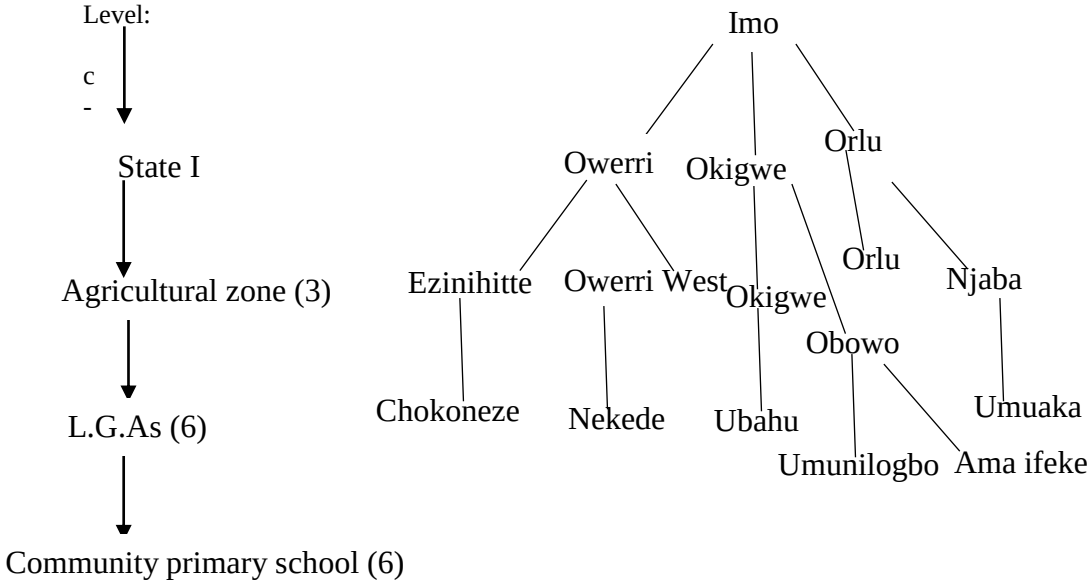

Fig 1. Selection of study location

In each of the six primary schools, twelve (12) pupils of primary six and eight (8) teachers were selected, this gave seventy two (72) pupils and forty eight (48) teachers this therefore gave a total sample size of 120 respondents. Interview schedules were prepared and used to solicit information on the subject matter. Data were subjected to descriptive status as well as regression analysis.

Measurement of variables

In order to assess perception of respondents on programme perceived seven (7), item perception statements were measured on 4 – point Likert-type rating scale of strongly agree = 4, agree 3 = , disagree = 2, strongly disagree = 1. Respondent mean scores were computed for each of perception statements by adding the weights of 4,3,2,1.

A midpoint was obtained thus; $3 + 2 + 1 = {}^{6}/_{3} = 2.0$. Mean score greater than or equal to 2.0 implied fair perception and otherwise in order to examine effectiveness of HGSFP in the study area, 3 – pint likert-type of scale very effective = 3, effective = 2 and not effective = 1. Thus $3 + 2 + 1 \frac{6}{3} = 2.0$. Any mean greater than or equal than 2.0 effective and otherwise ineffective.

In order to determine satisfaction derived from the programme received, by respondents seven (7) item satisfaction statements were measured on 4-point Likert-type rating scale of very satisfactory = 4, satisfactory = 3, unsatisfactory = 2 and very unsatisfactory = 1. Respondents mean scores were computed for each of satisfactory statements by adding the weights of 4,3,2,1. A midpoint was obtained thus; $4 + 3 + 2 + 1 = {}^{10}/_{4} = 2.5$. Mean scores greater than or equal to 2.5 implied satisfactory and otherwise unsatisfactory.

In order to determine performance of rural children in the programme, Eight (8) item performance statements were measured on 4 – point likert-type rating scale of excellent = 4, good = 3, average = 2,

poor = 1. Respondents mean scores were computed for each of performance statements by adding the weights of 4,3,2,1. A midpoint was obtained thus, 4 + 3 + 2 + 1 = $^{10}/_{4}$ = 2.5. Mean score greater than or equal to 2.5 implied good performance otherwise poor performance.

In order to identify constraints to effective school feeding programme, 8 item constraints statements were measured on 3-points likert-type rating of very serious = 3, serious = 2 and not serious = 1. Respondents mean score were computed for each of constraints statements by adding the weight of 3, 2, 1. A midpoint was obtained thus; 3 + 2 + 1 = $^{6}/_{3}$ = 2.00. Mean score greater than or equal to 2.0 implied serious constraints otherwise not serious constraints.

Multiple regression analysis was used in determining the factors influencing the performance of rural school children beneficiaries in the programme. The four functional forms of regression model viz linear, semi-log, exponential and double log were tried. The best fit was chosen as the lead equation, based on its conformity with the econometric and statistical criteria such as the magnitude of R^2, F-ratio and number of significant variables.

The model is specified as $Y = f(x_1, x_2, x_3 \ldots x_8 + ei)$. The four functional forms are expressed as follows:

Linear function

$Y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + ei$

Semi-log function

$Y = L_nb_0 + b_1L_nx_1 + b_2L_nx_2 + b_3L_nx_3 + b_4L_nx_4 + b_5L_nx_5 \ldots. B_8L_nx_8 + ei$

Exponential function

$LnY = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + \ldots.. b_8x_8 + ei$

Double-log function

$LnY = L_nb_0 + b_1L_nx_1 + b_2L_nx_2 + b_3L_nx_3 \ldots + b_8L_nx_8 + ei$

Where;

Y = performance (improvement)

X_1 = child enrollment in school (enlisted)

X_2 = children attendance to school (in number present)

X_3 = health status of respondent number of times been sick per pupil in a week

X_4 = intelligent queint (in percentage %)

X_5 = number of absenteeism (in number per week)

X_6 = retention in school number in class per session

X_7 = position in class or exams (in number)

X_8 = appearance of pupil (clean =1 otherwise 0)

Ei = error term

RESULTS AND DISCUSSION

Table 1: Perception of rural children about the programme

Perception about the programme	Strongly agree (4)	Agree (3)	Disagree (2)	Strongly disagree (1)	Total	Mean
Programme should be scraped	280	90	30	5	405	3.38
Not relief to parents	260	120	20	5	385	3.21
Does not improve health status	200	120	40	10	390	3.08
It is not regular	280	120	14	3	417	3.48
It is not beneficial	320	90	10	5	425	3.54
It is government corruption strategy	320	60	30	5	415	3.54
It is not nourishable	240	90	40	10	380	3.17
It is a scam	340	75	2	8	425	3.54
						26.94
Grand mean (ẋ)						3.37

Source: field survey, 2022.

Perception of respondents about the programme, data in Table 1 shows that respondents agreed that the programme was perceived as follows beneficial (ẋ = 3.54), government corruption strategy (ẋ = 3.54), a scam (ẋ = 3.54), not regular (ẋ = 3.48), should be scrapped (ẋ = 3.38), not relief to parent (ẋ = 3.21), not nourishable (ẋ = 3.17), and does not improved health status (ẋ = 3.08). The mean perception score was 3.37 indicating that the respondents had high perception about the programme. This result agreed with Eze, (2017) that perception and attitude of targeted group to sponsor programmes enhances their performance.

T able 2: Perceived effectiveness of the programme by respondent

Perceived effectiveness	Very effective	Effective	Not effective	Total	Mean
Increase enrollment	210	60	20	290	2.42
Increase school retention	195	100	5	300	2.50
Improved health status	180	80	20	280	2.33
Improved learning abilities of pupils	225	40	25	290	2.42
Increase school attendance	255	30	20	305	2.54
Improved education performance	15	30	100	145	1.21
Reduced school drop-out	30	40	90	160	1.33
Reduce under nourishment of pupil	204	8	8	220	1.83
Reduce disease infection	240	50	15	305	2.54
Improved sanitation/cleanliness of environment and pupils	15	40	95	150	1.25
Grand mean ẋ 1.99					

Source: field survey, 2022.

Effectiveness of the programme

The distribution of respondents by perceived effectiveness of the programme is shown in table 2. The result indicate that the respondents effectiveness of the programme were as follows increased school attendance (ẋ = 2.54), reduced disease infection (ẋ = 2.50), increase learning abilities (ẋ = 2.42) and increase child school enrollment (ẋ = 2.42), improved health status (ẋ = 2.33). The result also reveal that

the programme was not effective because it did not improve educational performance (ẋ = 1.21), sanitation/cleanliness (ẋ = 1.33) reduce under nourishment (ẋ = 1.83) and did not reduce school drop-out (ẋ = 1.33). The mean effectiveness score was 1.99, which implied that the programme was not effective. This result is in consonance with Ndu, (2015) that governments embarked on several programme targeted mass literary but due to wrong approaches and strategies used such laudable programmes were not achieved.

The implication of this results implies that perceived effectiveness of the programme varies. The reason could be that the grand mean effectiveness of the programme was below the mean score of the whole although the programme was effective in some of the item statements investigated.

The finding agreed with Mousse (2016) that many programme carried out in rural area failed to achieve its goals due to sharp practices by the previous administration.

Table 3: Derived satisfaction from the programme by respondents

Derived satisfaction of the programme by respondent	Strongly agree = 4	Agree = 3	Disagree = 2	Strongly disagree = 1	Total ẋ
Method used in sharing the food	320	75	20	5	
The time of school feeding	280	90	20	10	
The frequency of feeding	60	45	20	80	
Serving of balanced diet	100	30	20	80	
Joy of eating with others	320	75	20	5	
Saves at least a meal at home	280	75	30	10	
Relief parents worries of giving morning foods to pupils	60	45	20	80	
Saves time and money for the parents	240	75	40	15	
Grand mean 2.74					

Source: Field survey 2022

The distribution of respondent by their satisfaction derived from the programme is presented in Table 2. The data in table shows that their level of satisfaction in the programme were as follows; method used in sharing the food (ẋ = 3.50), joy of eating with others (ẋ = 3.50), time of school feeding (ẋ = 3.33) saves at least one meal at home (ẋ = 3.29), saves time and money for parents (ẋ = 3.04). The result also shows that the respondent were not satisfied with giving relief of worries to parents (ẋ = 1.70), serving of balanced diet (ẋ = 1.71), and frequency of feeding (ẋ = 1.92) the satisfaction mean score was 2.7 indicating that the respondents had favourable satisfaction derived from the programme. This result agreed with Njoku, (2022) that farmers derived high satisfaction from Radio – farmer programme in Imo State. This result disagreed with Orodho (2014) that lamented that hunger impedes the learning ability of children. This implies that pupils perceived satisfaction derived from the programme were highly favourable.

Table 4: performance of beneficiaries of the programme

Performance items	Strongly agree	Agree	Disagree	Strongly disagree	Total	Mean
Increased fluid enrollment	320	60	10	5	395	3.29
Increased school attendance	280	75	30	10	395	3.29
Increase school retention	320	60	30	10	420	3.50
Reduced school absenteeism	360	45	20	5	430	3.58
Increase passes in examination	260	45	20	5	430	3.58
Cleanliness/sanitation	100	30	10	80	220	1.83
Reduced school drop-out	280	90	30	5	405	3.38

Reduced under nourishment	260	90	10	20	380	3.17
Increased intelligent of pupils	320	45	10	20	395	3.29
Grand mean ẋ						2.82

Source: field survey, 2022

Result in table 4, revealed the distribution of respondents based on the performance of the beneficiaries in the programme. Nine item statements of performance were investigated. Reduce school pupils absenteeism had the highest mean score (ẋ = 3.58), followed by increase school retention and completion (ẋ = 3.50), passes in examinations (ẋ = 3.58), child enrollment (ẋ = 3.29), increase attendance (ẋ = 3.29), intelligent quient (ẋ = 3.29) reduced school drop-out (ẋ = 3.38), and under nourishment (ẋ = 3.17) while cleanliness/sanitation was the lowest mean (ẋ = 1.83). The performance mean score was 3.21 indicating that the pupils/respondents had favourable programme benefit. This result is in consonance with Ndu, (2015) that fight against hunger will enhance learning and develop as healthy and productive adults. This implies that home school feeding programme if properly carried out will reduce high rate of illiteracy confronting our rural communities.

Table 5: perceived constraints to effective school feeding programme

Perceived constraints	Very serious	Serious	Not serious	Total	Mean (ẋ)	Standard deviation
Failure on the part of host communities	240	60	10	310	2.58	0.1368
Insufficient release of fund	75	40	75	190	1.58	0.2016
Lack of prompt release of fund	270	40	10	320	2.67	0.1528
Leadership failure	300	30	5	335	2.79	0.2084
Corruption on the part of officers/handlers	315	20	5	340	2.83	0.1873
Poor government attitude about the programme	285	30	10	325	2.71	0.1993
Change of administration	255	50	10	315	2.63	0.2319
Grand mean					2.54	
Bench mark					2.0	

Source; field survey, 2022

Perceived constraints to effective Home Grown School feeding programme in Imo State, Nigeria. The distribution of respondents' perceived constraints to effective school feeding programme is presented in table 5. The table shows that out of seven (7) possible constraints investigated in this study, six (6) were considered to be serous constraints to effective school feeding programme in Imo State. These serious constraints included corruption (ẋ = 2.83), leadership failure/insincerity (ẋ = 2.79), poor government attitude about the programme (ẋ = 2.71), change of administration (ẋ = 2.63), and failure on the part of host communities (ẋ = 2.58). This finding implies that in effective of the programme. The finding in this study agreed with those of Nwaobiala, Nnamdi and Ekumankama (2018) that government programmes targeted at rural children's education had good objectives but due to wrong approaches and strategies and leadership insincerity continues to affect education in rural areas.

The table further revealed a grand mean constraints of 2.57. This implies that the study shown that respondents perceived constraints to effectiveness of the programme was high in six (6) investigated constraints because their individual mean constraints. This result showed that the standard deviations were closely packed and small. This implied that the data had high degree of uniformity and reliability of the result. This is in consonance with the finding of Njoku, (2022) that explained that the smaller the standard deviation, the higher the degree of reliability of the estimates. This finding on corruption as the major challenge to school feeding programme in the area affirmed the assertion of sun.

Table 6: Regression estimates of the determinants of performance of HGSFP rural child pupil

Variables	Linear+	Exponentials	Double-log+	Semi-log
Constant	409481.70	25200	10.2124	-424239.20
Enrollment	(1.40^{x})	(12.16^{xxx})	(4.42^{xxx})	(-0.64)
	-2503.59	0.0802	0.1028	-1957.24
Attendance	(-0.04)	(0.31)	(0.40)	(-0.03)
	1244499	0.0235	0.7626	348923.50
Health status	(2.93^{xxx})	(1.52^{x})	(1.27^{x})	(2.02^{xxx})
	-67769.41	-0.0725	-0.1625	-78757.80
Intelligent quient	(2.00^{xx})	(-0.56)	(-1.03^{x})	(-2.22^{xx})
	-8054.95	-0.2126	-06448	-222673.30
Absenteeism	(-1.47^{x})	(-1.06^{x})	(-1.66^{x})	(-1.88^{x})
	-355509.86	-0.1222	-04458	-117319.90
Retention compl	(2.97^{xxx})	(-2.80^{xx})	(-2.75^{xx})	(-2.50^{xx})
	6323.10	0.0038	0.1323	30137.67
Passes in exams	(1.88^{x})	(0.32)	(0.80)	(0.63)
	32421	0.0025	0.2946	6886.34
Evaluation/appearance	(2.98^{xx})	(2.55^{xx})	(2.36^{xx})	(1.90^{x})
	341.97	0.0008	0.1673	-44814.17
Continuous assessment	(1.10^{x})	(-0.78)	(-1.30)	(-1.20^{x})
R^2	0.5238	0.3422	0.3011	0.40431
R-adjusted	0.4842	0.2744	0.2311	0.3355
Z	4.81^{xxx})	3.14^{xxx}	256^{xx}	2.60^{XX}

Source: Field Survey, 2022

( ) variables in parenthesis are Z-values
+ lead equation
$P \leq 10$, $^{xx}P \leq 0.5$ and $^{xxx}P \leq 0.1$

Factors determining performance of HGSFP in Imo State. The result in Table 6 showed that the ordinary least Square (OLS) Multiple regression estimates of the determinants of HGSFP in Imo State. The linear functional form was chosen to be the lead equation because of a high R^2 value number of significant factors and agreement with a priori expectation. The R^2 value of 0.5238 indicates 52.38% variability in outcome performance was explained by the independent variables. The value of 4.81 was highly significant at 1% level of probability implying that the regression was a good fit. The coefficient for child enrollment was positive and significant at 1%. This implied that any increase in enrollment is expected to lead to a corresponding increase in performance.

This is against a priori expectation probably because the enrollment of children seem to be more credible thereby making more improvement than their non-beneficiaries. This result is in Tunderm with Adelekan (2017) that school feeding entails provision of at least one meal for the pupils on every school day. The coefficient for health status was negative and significant at 10% level of probability. This implies that the beneficiaries were physically fit more than non-beneficiaries.

This could be because their parents were more educated than their counter parts. The coefficient for retention and completion was negative and significant at 1% level of significance. This implies that a decrease in level of performance. The coefficients for passes in examinations, attendance and child appearance/cleanliness positive and significant at 1%. This implies that any increase in the variables was attempted for child performance. This is in consonance with Adolo (2015) that the success of home Grown School Feeding Program include mass enrollment, attendance and child appearance. The coefficient for Assessment and Intelligent Quient were positive and significant at 10% level. This implies that increase in assessment and Intelligent Quient would lead to a corresponding increase in performance of the beneficiaries in the programme. This is in line with Akanbi (2013) and Ekwerendu (2017) that asserted that HGSFP is a laudable programme lamented that a lot of challenges has affected the positive impact of the programme.

CONCLUSION AND RECOMMENDATIONS

The study has shown that Home Grown School Feeding Programme in the area was not effective although it was satisfactory and impacted on the performance of the beneficiaries although had serious constraints. Given the finding it could be concluded that school feeding programme has potential for improving the rural pupils performance. The most important determinants of school feeding on performance was health status. This implied that rural pupils stand to improve more performance they increase their health status. There is need therefore

for school administrators, educators and providers in the area to increase their funding by increasing their budget allocations. Follow up and monitoring of administrators and beneficiaries to ensure that they utilize the funds provided.

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