
Primary School Feeding Programme (SFP) and Pupils' Enrolment, Retention and Performance in Katsina State, Nigeria

Ibrahim, M., *Ikwuakam, O.T & Haruna, S.Y
Federal College of Education, Katsina, P.M.B 2041, Katsina State
*Corresponding author: ikwuosca@yahoo.com

doi: <https://doi.org/10.37745/bjmas.2022.0174>

Published May 2, 2023

Citation: Ibrahim, M., Ikwuakam, O.T & Haruna, S.Y. (2023) Primary School Feeding Programme (SFP) and Pupils' Enrolment, Retention and Performance in Katsina State, Nigeria, *British Journal of Multidisciplinary and Advanced Studies: Education, Learning, Training & Development* 4 (2),171-186

ABSTRACT: *This study investigated the effect of primary SFP on pupils' enrolment, retention and performance in Katsina State using survey design approach. Multistage sampling technique was used to select 542 respondents. Data were collected using structured questionnaire. Descriptive and inferential statistics were employed in data analysis. Results showed that majority were females, with NCE educational qualification, had mean age and work experience of 37 and 9 years respectively. Level of enrolment was high as pupils' enrolment, regular and punctual school attendance increased. Also, retention level was high as pupils' absenteeism from end of session, term exams, drop-out, leaving school before closing time, irregular school attendance reduced. Academic performance level was high following improvement in class test, term and end of session exams. Over-enrollment, ineffective supervisions of cooking environment and food preparation ranked top constraints. One way ANOVA result showed significant difference among senatorial districts on enrolment, retention and academic performance. Enrolment was significantly high in NSD than in KCSD and southern senatorial district (SSD) while retention in NSD was higher than in KSD and SSD. Similarly, NSD recorded high academic performance than KCSD that had high performance rate than SSD. The test of relationship using PPMC revealed that constraint significantly correlated with pupils' enrolment, retention and performance levels except for retention in KCSD. Pupils' enrolment, retention and performance have improved due to SFP. While SFP should be sustained, caterers should prepare and cook the food within the schools for collaborative quality control and supervision by teachers/headmasters and supervisors from Education Ministry*

KEYWORD: School feeding, enrolment, retention, performance, constraints

INTRODUCTION

There is no doubting the fact that School feeding programme (SFP) has become one of the important initiatives employed in most developed, and developing nations to curb the gale of

poverty that has ravaged most countries and deterred the rates of school enrolment, retention, and performance. Its emergence in United Kingdom and the United States of America dates back to 1930s and 1700s (Tomlinson 2007).

In Africa, SFP is a consequential outcome of the Millennium Development Goals (MDGs) initiative, and conference held by African leaders, which aimed at resolving issues of peace, security, good economic, political and corporate governance, and poverty alleviation (Akanbi, 2013). In order to achieve these lofty targets, Nigeria was privileged to be among the pilot countries charged with the responsibility of trying the programme out with a view to reveal the extent it could facilitate pupils' enrollment, retention and performance.

In order to give the initiative the necessary legislative backing and implementation also, the Universal Basic Education Act was enacted in 2004 by the Federal Government of Nigeria to give the programme the credence for its acceptability in the country's educational space. Expectedly, the programme targeted providing school children with adequate meal during school days, reduce malnutrition, and enhance enrollment, retention and cognition (FME 2007). It was also aimed at assisting poor families send their children to school in addition to assisting parents improve the nutrition of school going children.

Incidentally also, Katsina State was among the States in Nigeria selected to began a phased-pilot roll out implementation of the programme in 2005. The reason is that Katsina along with Sokoto and Jigawa were captured as States in the North West with low school enrolment and retention rates (FGN/UNICEF UNESCO/UNDP E2000). Another reason is that as a social protection intervention, it was assumed that it may compensate parents for the direct and indirect educational costs of enrolling their wards in school (Oyefade 2014) and that the girl children who remain doubly at disadvantage in most northern states (FGN/UNICEF UNESCO/UNDP E2000) may have a window of opportunity to enroll and remain in school.

UNICEF (2001) has also emphasized the crucial importance of stimulation during early years of child's life, and cognitive development. The report further revealed that there are critical periods in development when environment can influence how an individual's brain is wired for appropriate functions, and if these windows of opportunities are missed, the brain cannot receive the appropriate stimulation. Thus, malnutrition in early years of life, when the brain is in its periods of rapid growth, can have serious effect on the intellectual development by damaging the central nervous system or responsiveness to stimuli and learning interference of a child. This is one area SFG is sacrosanct in mitigating.

Statement of problem

Katsina State is one of the States in Nigeria that took the pilot status in the implementation of SFP. Fundamentally, the programme is an intervention that aims at assisting poor families by providing

meals to school going children in school (Oyefade 2014). This implies that meals are to be served as a motivation on poor parents to send their children irrespective of gender to school, keep them, and facilitate their mental readiness.

It has also been acknowledged that whereas food is classically a means of providing energy and building blocks to the body, its influence on the mental function, and development of a child is remarkable (Alabi 2003). Overall, SFP as an intervention has become a commendable social safety net with enormous benefits for children, parents and communities as a whole.

However, despite the peculiarities of the programme in motivating parents enroll their children in school, and cause improvement in pupils' retention and academic performance, some salient factors have reportedly posed challenges to its efficiency and effectiveness. It is observable that in some areas, dearth of sufficient body of knowledge on its benefits and constraints has been a common feature particularly in Katsina State. This however, needs verification if such existing gap in literature is to be filled.

Objectives of the study

The general purpose of the study is to assess the effect of school feeding programme on the enrolment, retention and academic performance of primary school pupils in Katsina State. The specific objectives include to:

1. ascertain the effect of SFP on pupils' enrolment rate
2. examine the effect of SFP on pupils' retention rate
3. find out the effect of SFP on pupils' level of academic performance
4. identify the challenges associated with the practice of SFP

LITERATURE REVIEW

The decisions to enroll a child in school and, for the child to regularly attend classes and perform expectedly are often times predicated on plethora of factors. These factors include perceived values of education, direct and indirect cost of schooling and availability and quality of school facilities (Oyefade 2014). It is also obvious that most households shun schooling idea or even withdraw their children already enrolled while those who attend do so under hunger every day. This has necessitated SFP that implies provision of quality food to children (Adekunle, *et. al* 2016). As a safety net, SFP is targeted at compensating parents for such direct educational costs, alleviating short-term hunger among pupils; improve enrolment, retention, cognition and motivate parents to prefer sending their children to school irrespective of gender (Akanbi 2013).

Parents' inability to send children to school has been attributed to poverty and other socio-cultural constructs. Thus, the failure to make significant enrolment, retention and performance in school is seemingly a reflection of poverty in most households (Adekunle, *et. al* 2016). This has been corroborated by the study of (FOS K-1999a) which revealed that poverty has become increasingly

widespread with increases in the proportion of moderate and core poor. The situation is also such that it is easy to imagine how difficult it is today for most families to afford the costs of sending their children to school and provide the home environment and psychological support needed for their progress in learning (UNICEF 2001, Falayajo E-1997). This is a major reason for the low rate of enrollment, retention and performance as witnessed in the nation's educational system in some states (FGN/UNICEF UNESCO/UNDP E2000).

The correlation between food, and child's mental health and development has also been documented. A study by among school age children in Ibadan found that height-for-age was a good predictor of mental performance, with stunted children performing poorly on various scholastic aptitude tests (Akinmokun G-1998). The potentials SFPs in improving pupils' performance have also been corroborated by (Yunusa 2012).

These finding were replicated in a study in Lagos, which found that well nourished children of normal height and weight for their ages had average mental development scores that are seven points above the scores of the malnourished, stunted and wasted children (Aina, Etta & Zeitlin1992). Common sense has it that micro-nutrients deficiencies, like iodine, iron, and vitamin A, have adverse consequences leading to reduced mental intelligence, psychomotor retardation, mental, and neurological damage, and in most cases, cretinism, (a serious form of mental impairment). In the case of iron deficiency, the effect includes irritability and low level of engagement with interest in the immediate environment, again impairing capacity for stimulation (UNICEF 2001, FME 2007).

Although there are evidences establishing the benefits of SFP in increasing enrolment, retention and performance rates, different dimensions of challenges have also been exposed to characterized the implementation of the programme (World Bank, 2007).World Food Program (2010) states also that financial burden of running the program has been a serious challenge as government has no clear policy and support base for it. Shortages of water, poor infrastructure, inadequate food, harsh climatic conditions, insecurity, and poverty have also been identified as challenges (Oduya & Mwangi 2019). Finan (2010), also noted that water scarcity, and inadequate infrastructure have continued to cripple the operation and sustainability of the programe. Consequently, Uduku (2011) opined that SFP would be best if the challenges posed by inadequate learning materials, physical facilities, and teacher motivations are also mitigated.

METHODOLOGY

A survey research design was adopted for the study as the approach deals with data collection and using same objectively to describe current phenomena (Isangedighi *et. al* 2004). Whereas all primary school teachers from the school feeding participating schools formed the population of the study, multistage sampling technique was employed in sampling the respondents. In the first

stage, systematic sampling technique was used to select 30% (10) of the 34 local Government Areas (LGAs) from the three senatorial districts of the state (Katsina, Jibia, Batsari and Dutsima, Daura, Mashi, Baure, Funtua, Malumfashi and Bakori) with 78, 69, 40, 54, 52, 47, 75, 56, 32, 32 participating schools respectively. The second stage involved using systematic sampling technique to select 30% of the participating schools from each LGAs to give 23, 16, 21,16, 17, 10, 10,16, 14, 23 schools respectively. Also using systematic sampling technique, 4 teachers were selected from the list of teachers in each of the selected participating schools to give the sample size of 641 teachers that were used for the study.

Structured questionnaire was used to data on respondents' personal characteristics, effect of SFP on pupils' enrolment, retention, performance, and constraints. In measuring the effect of SFP on rate of enrolment, a five-point rating scale of strongly agree = 5, agree = 4, undecided = 3, disagree = 2 and strongly disagree = 1 was used. The total mean score was obtained and respondents who scored below the mean value were adjudged to have low enrolment rate, while those whose enrolment scores equals or greater that the mean score were adjudged to have high level of enrolment. Retention and academic performance rates were measured using similar approach as in enrolment rate. Challenges to the operation of the initiative were measured on a 3- points Likert scale of serious = 2, Mild = 1, not a challenge = 0. Frequency counts, percentages, means and standard deviation were the descriptive tools for analysis while Analysis of Variance (ANOVA) and Pearson Product Moment Correlation (PPMC) were the inferential statistical tools used.

RESULTS

Personal characteristics of the teachers

Table 1 presents results on personal characteristics of the respondents in the study area. The result shows that 45.9%, 23.2%, 22.0% were between the ages of 31-40, 21-30 and 41-50 respectively. The result also that 6.9% of the respondents were above 50 years while 2.0% were below 20 years of age. On the average also, the result indicates that the respondents were 37 years of age. The result on gender also revealed that while 65.8% were females, 34.2% were males. In the same vein, the respondents had mean age and experience of 37 and 9 years respectively while 79.6% and 19.0% possessed NCE and B.ED educational qualification respectively.

Table 1: distribution of teachers based on personal characteristics

Variables	F		Mean±SD
Age			36.96±8.26
less or equal 20	13	2.0	
21-30	149	23.2	
31-40	294	45.9	
41-50	141	22.0	
>50	44	6.9	
Gender			
Male	219	34.2	
Female	422	65.8	
Educational attainment			
NCE	510	79.6	
B.ED	122	19.0	
M.Sc	7	1.1	
PhD	2	.3	
Teaching experience			9.40±7.55
less or equal 5	272	42.4	
6-10	184	28.7	
11-15	65	10.1	
16-20	60	9.4	
>20	60	9.4	

Source: Field Survey

Rate of pupils' enrolment in school due to school feeding

Table 2 presents respondents' perceptions on pupils' rate of enrolment due to school feeding. The result across the state indicate that 97.5%, 70.4%, 61.0%, 53.5% strongly agreed that school feeding has improved involvement in extra-curricular activities, increased enrollment, encouraged pupils to attend school regularly and punctually respectively. Also 44.0% agreed that school feeding has improved involvement in curricular activities. In the SSD, respondents strongly agreed that school feeding has increased enrollment (mean = 4.64), encouraged pupils to attend school regularly (mean = 4.51), punctuality (mean = 4.40), and improved involvement in curricular activities (mean = 4.03). In NSD, mean = 4.64, mean = 4.59, mean = 4.56, mean = 4.36 and mean = 1.76 of the respondents strongly agreed that school feeding has increased enrollment, encouraged attend school regularly, increased punctuality, improved involvement in curricular activities and improved involvement in extra-curricular activities respectively. The result also shows that in KCSD, respondents strongly agreed that school feeding has increased enrollment (mean = 4.66), encouraged pupils to attend school regularly (mean = 4.47), increased punctuality (mean = 4.41) improved involvement in curricular activities (mean = 4.04), and improved involvement in extra-curricular activities (mean = 1.88).

Table 2: distribution of respondents based on enrolment due to school feeding

SN	Items	SA	A	U	D	SD	Mean			
							Total	South	North	Central
1	School feeding has increased enrollment	70.4	25.3	2.8	0.9	0.6	4.64	4.59	4.64	4.66
2	Punctuality to school	53.5	37.8	5.1	2.8	0.8	4.40	4.18	4.56	4.41
3	Pupils are encouraged to attend school regularly	61.0	32.8	3.4	1.9	0.9	4.51	4.47	4.59	4.47
4	There is improved involvement in curricular activities	39.3	44.0	9.7	5.8	1.2	4.14	4.03	4.36	4.04
5	There is improved involvement in extra-curricular activities	97.5	1.6	7.0	41.3	39.3	1.87	2.02	1.76	1.88

Source: Field survey 2023

Rate of pupils' retention in school due to school feeding

Table 3 shows respondents' perception on pupils' rate of retention due to school feeding. The result indicates that across the state, the respondents strongly agreed that due to school feeding, absenteeism from end of session exam has reduced (52.3%), drop-out rate reduced (51.6%), leaving school before closing time has reduced drastically (51.1%), there is increased rate of attendance to class test (49.8%) completion rate has increased (49.1%) and absenteeism from end of term exam has reduced (49.0%). In SSD, respondents strongly agreed that absenteeism from end of term exam has reduced (mean = 4.17), absenteeism from end of session exam has reduced (mean = 4.13%), there is increased rate of attendance to class test (mean = 4.12%) completion rate has increased (mean = 4.08%), leaving school before closing time has reduced drastically (mean = 4.07%). The result further indicated that respondents strongly agreed that in NSD, there is increased rate of attendance to class test (mean 4.45), leaving school before closing time has reduced drastically (mean = 4.43), absenteeism from end of session exam has reduced (mean = 4.43), absenteeism from end of term exam has reduced (mean = 4.39), completion rate has increased (mean = 4.37). In the vein, respondents in KCSD strongly agreed that absenteeism from end of session exam has reduced (mean = 4.33), there is increased rate of attendance to class test (mean = 4.29), absenteeism from end of term exam has reduced (mean = 4.23), completion rate has increased and leaving school before closing time has reduced drastically (mean = 4.10).

Table 3: distribution of respondents based on rate of pupils retention due to school feeding

SN	Items	SA	A	U	D	SD	Mean			
							Total	South	North	Central
1	Drop-out rate has reduced	51.6	34.9	5.5	5.6	2.3	3.00	1.82	1.64	1.73
2	Completion rate has increased	49.1	33.4	10.3	4.8	2.3	4.22	4.08	4.37	4.18
3	Leaving school before closing time has reduced drastically	51.1	32.0	5.9	8.1	3.0	4.20	4.07	4.43	4.10
4	There is increased rate of attendance to class test	49.8	38.5	6.2	3.6	1.9	4.31	4.12	4.45	4.29
5	Absenteeism from end of term exam has reduced	49.0	37.4	7.2	4.4	2.0	4.27	4.17	4.39	4.23
6	Absenteeism from end of session exam has reduced	52.3	36.0	5.0	4.7	2.0	4.32	4.13	4.43	4.33

Source: Field Survey 2023

Rate of pupils' academic performance due to school feeding

Table 4 shows the result on respondents' perception on pupils' academic performance due to school feeding. The result revealed that respondents strongly agreed that across the state, cordial relationship among pupils has improved (50.1%), end of term exams performance has improved (49.3%), performance in class test has improved (49.3%), end of session exam performance has improved (46.5%), there is improved performance in extra-curricular activities (45.4%), and performance in curricular activities has improved (44.8%). Using mean values, the respondents also strongly agreed that in southern senatorial district, cordial relationship among pupils has improved (mean = 4.22), there is improved performance in extra-curricular activities (mean = 4.17), end of term exams performance has improved (mean = 4.16), end of session exam performance has improved (mean = 4.15), performance in class test has improved (mean = 4.14), performance in curricular activities has improved (mean = 4.13). Result in NSD further revealed that respondents strongly agreed that end of term exams performance has improved (mean = 4.50), performance in class test has improved (mean = 4.47), end of session exam performance has improved (mean = 4.42), performance in curricular activities has improved (mean = 4.41, cordial relationship among pupils has improved (mean = 4.39), and there is improved performance in extra-curricular activities (mean = 4.29). Similar trend of result was obtained in KCSA as respondents strongly agreed that performance in class test has improved (mean = 4.34), end of term exams performance has improved (mean = 4.33), end of session exam performance has improved (mean = 4.28), performance in curricular activities has improved (mean = 4.27, there is improved performance in extra-curricular activities (mean = 4.27), and cordial relationship among pupils has improved (mean = 4.28).

Table 4: distribution of respondents based on rate of performance due to school feeding

SN	Items	SA	A	U	D	SD	Mean			
							Total	South	North	Central
1	there is improved performance in extra-curricular activities	45.4	41.8	4.7	4.5	3.6	4.21	4.17	4.29	4.27
2	performance in curricular activities has improved	44.8	44.9	4.1	4.8	1.4	4.27	4.13	4.41	4.27
3	performance in class test has improved	49.3	40.9	5.3	3.3	1.2	4.34	4.14	4.47	4.34
4	end of term exams performance has improved	49.3	40.2	6.6	3.4	0.5	4.34	4.16	4.50	4.33
5	end of session exam performance has improved	46.5	42.9	5.5	3.7	1.4	4.29	4.15	4.42	4.28
6	cordial relationship among pupils has improved	50.1	37.8	5.0	4.5	2.7	4.28	4.22	4.39	4.23

Source: Field Survey 2023

Levels of enrolment, retention and performance due to school feeding

The result in Table 5 is a summary of the distribution of respondents based on levels of pupils' enrolment, retention, and academic performance due to school feeding programme. The result indicated that respondents were categorized into two based on enrolment, retention, and performance levels using mean range of scores as benchmarks. Consequently, in Katsina State, pupils' levels of enrolment (99.5%), retention (97.5%) and academic performance (93.9%) were high. Also, in SSD, enrolment (100.0%), retention (98.0%) and academic performance (97.7%) were high while similar high levels of enrolment (99.1%), retention (99.1%) and academic performance (98.6%) were obtained in NSD. Again, in KCSD pupils' levels of enrolment (99.6%), retention (96.1%) and academic performance (98.9%) were high

Table 5: distribution of respondents based on levels enrolment, retention and performance

Indicators	Levels	Katsina	South	North	Central	Range of scores
Enrolment	Low	3	0.5	2	0.9	1 0.4 12.00-19.49
	High	638	99.5	148	100.0	209 99.1 281 99.6 19.50-30.00
Retention	Low	16	2.5	3	2.0	2 0.9 11 3.9 6.00-22.00
	High	625	97.5	145	98.0	209 99.1 271 96.1 23.00-30.00
Performance	Low	15	2.3	9	6.1	3 1.4 3 1.1 10.00-25.69
	High	626	97.7	139	93.9	208 98.6 279 98.9 25.70-30.00

Source: Field Survey

Constraints to enrolment, retention and academic performance

Table 6 shows constraints to pupils’ school enrolment, retention and performance. The result indicates that across the state, over-enrollment of pupils (69.0%), insufficient dining hall (67.1%), ineffective supervision of cooking environment (66.6%), insufficient food (66.1%), ineffective supervision of food preparation (62.9%), insecurity (56.9%) and inadequate access to clean water (52.1%) were serious constraints. Using mean values, over-enrollment of pupils (mean = 1.55), ineffective supervision of cooking environment (mean = 1.52) and ineffective supervision of food preparation (mean = 1.51) ranked 1st, 2nd and 3rd as constraints in the state. In SSD, over-enrollment of pupils (mean = 1.49), ineffective supervision of food preparation (mean = 1.43), ineffective supervision of cooking environment (mean = 1.41), insufficient dining hall (mean = 1.39) and insufficient food (mean = 1.39) were serious constraints while insufficient food (mean = 1.59), ineffective supervision of cooking environment ((mean = 1.59), intruders (mean = 1.57), over-enrollment of pupils (mean = 1.57), insufficient dining hall ((mean = 1.53), and ineffective supervision of food preparation (mean = 1.53) were also serious constraints in NSD. In KCSD also, over-enrollment of pupils ((mean = 1.56), insufficient food ((mean = 1.54), ineffective supervision of cooking environment, ineffective supervision of food preparation ((mean = 1.53, insufficient dining hall ((mean = 1.50) were further perceived as serious constraints.

Table 6: Constraints to enrolment, retention and performance

SN	Items	Serious	Mild	Not a constraint	Mean Total	Rank	South	North	Central
1	Ineffective supervision of food preparation	62.9	25.0	12.2	1.51	3	1.43	1.53	1.53
2	Ineffective supervision of cooking environment	66.6	19.0	14.4	1.52	2	1.41	1.59	1.53
3	over-enrollment of pupils	69.0	16.8	14.4	1.55	1	1.49	1.57	1.56
4	inadequate access to clean water	52.1	27.1	20.7	1.31	9	1.22	1.23	1.43
5	Insecurity	56.9	18.3	24.8	1.32	7	1.30	1.15	1.46
6	poor road infrastructure	37.1	29.8	37.1	1.04	11	1.11	0.88	1.12
7	insufficient classrooms	30.7	21.1	48.2	1.17	10	1.14	1.04	1.29
8	inadequate furniture	20.6	18.1	61.3	1.41	6	1.30	1.37	1.49
9	insufficient dining hall	67.1	12.3	20.6	1.46	5	1.39	1.53	1.50
10	insufficient food	66.1	17.5	16.4	1.50	4	1.37	1.59	1.54
	Intruders	57.9	15.9	26.2	1.32	7	1.14	1.57	1.47

Source: Field Survey 2023

Test of difference by senatorial districts on level of enrolment, retention and performance

The result of one way ANOVA analysis on Table 7 shows that there was significance difference across all the senatorial districts on enrolment (F = 6.985), retention (F = 7.778), performance (10.039).

Table 7: distribution of based on ANOVA by senatorial districts on level of enrolment, retention and performance

		Sum of Squares	df	Mean Square	F	Sig.
Enrolment	Between Groups	45.630	2	22.815	5.985	0.003
	Within Groups	2432.292	638	3.812		
	Total	2477.922	640			
Retention	Between Groups	169.406	2	84.703	7.778	0.000
	Within Groups	6947.695	638	10.890		
	Total	7117.101	640			
Performance	Between Groups	272.487	2	136.244	10.039	0.000
	Within Groups	8658.895	638	13.572		
	Total	8931.382	640			

Source: Field Survey 2023

Table 8 is a Duncan post hoc test of multiple comparisons between the senatorial districts. The result shows that North senatorial district was highest for enrolment, and significantly higher than central (mean = 19.42) and south (mean = 19.20), which are not higher than each other significantly.

Table 8: Post-hoc test of mean separation for enrolment across senatorial districts

Senatorial districts	N	Subset for alpha = .05	
		1	2
South	148	19.1959	
Central	282	19.4255	
North	211		19.8815
Sig.		0.241	1.000

Means for groups in homogeneous subsets are displayed.

a Uses Harmonic Mean Sample Size = 199.439.

b The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 9 below shows further that the NSD (mean = 23.72) was highest for retention, and significantly higher than central (mean = 22.87) and south (mean = 22.39), which are both not higher than each other significantly. This was not expected as the senatorial district is under the state capital and could received better execution and monitoring.

Table 9: Post-hoc (Duncan) test of mean separation for retention across zones

Senatorial district	N	Subset for alpha = .05	
		1	2
South	148	22.3851	
Central	282	22.8688	
North	211		23.7204
Sig.		.144	1.000

Means for groups in homogeneous subsets are displayed.

a Uses Harmonic Mean Sample Size = 199.439.

b The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

The result on Table 10 shows further that NSD district (mean = 26.48) had highest for performance, and significantly higher than central (mean = 25.71), while the KCSD was also rated as significantly higher than the SSD (mean = 24.71)

Table 10: Post-hoc (Duncan) test of mean separation for performance across senatorial districts

Senatorial district	N	Subset for alpha = .05			
		1	2	3	1
South	148	24.7095			
Central	282	25.7128			
North	211	26.4787			
Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a Uses Harmonic Mean Sample Size = 199.439.

b The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Test of relationship between independent variables and levels of enrolment, retention and performance

The result on Table 11 reveals that overall, constraint was significantly correlated with enrolment ($r = -0.151$), retention ($r = -0.103$) and performance ($r = -0.126$). In the SSD, constraint was significantly related to enrolment ($r = -0.176$), retention ($r = -0.256$). However, in the KCSD, except for retention ($r = 0.084$), constraints significantly correlated with enrolment ($r = -0.119$) and performance ($r = -0.162$)

Table 11: PPMC test of relationship between constraint and levels of enrolment, retention and performance

Variables	Overall			Southern district			Northern district			Central district		
	r	P	D	r	P	D	R	p	D	r	p	D
Enrolment	-0.151	0.000	S	-0.176	0.032	S	-0.210	0.002	S	-0.119	0.046	S
Retention	-0.103	0.009	S	-0.256	0.002	S	-0.038	0.583	NS	0.084	0.161	NS
Performance	-0.126	0.001	S	0.148	0.073	NS	0.089	0.200	NS	-0.162	0.000	S

Source: Field Survey 2023

DISCUSSION OF RESULTS

The result that the average age of most teachers was 37 years implies that basic school teachers in the state are young, vibrant, and dynamic and can easily assess the effect of school feeding programme on pupils' enrolment, retention and academic performance. The dominance of female gender at this level of education is an indication of improved female education and uptake of public

job in the state. The average 9 years of teaching experience of most teachers implies further their ability to pass verdict of the effect of SFP on the pupils. Similarly, that most teachers possessed NCE/B.ED certificates means that the minimum requirement for teachers' recruitment in the state is strictly observed. The results corroborate the recent finding of Ikwuakam *et.al* (2023) on the use of Information Communication Technology (ICTs) by teachers in Katsina State.

The high levels of pupils' enrolment, retention, and academic performance in the state and across the senatorial districts due to SFP are indicative of the programme's effectiveness. It also shows the rate of poverty, hunger and food needs of pupils as well as the need to sustain the programme. The result concurs with Adekunle, *et. al* (2016), Oyefade, (2014), Yunusa (2012) and Jukes et al, (2008) who in their various studies found out that food incentive offered to pupils is highly responsible with the increasing enrolment, retention and improved academic performance.

On the constraints, over-enrolment of pupils, ineffective supervision of cooking environment and ineffective supervision of food preparation were revealed to most areas of constraints. The over-enrolment constraint was in with a priori expectation as most poor parents would see the programme as a relief for food provision to children. Ineffective supervision of cooking environment and food preparation were also anticipated as field experience revealed that the food were prepared outside the SFP participating schools while teachers/headmasters were absolutely excluded from the supervisory role. The result of the study conducted by Awuor (2016), Olubayo (2015) Munuche (2014) corroboratively outlined over-enrolment, proper monitoring and evaluation systems as factors affecting the implementation of the programme.

The result of one way ANOVA analysis shows that significance difference among the senatorial districts on enrolment, retention and academic performance. In Northern senatorial district, enrolment was significantly high, than in KCSD and SSD. Also, retention was significantly higher in NSD than in KCSD and southern senatorial districts. Similarly, NSD recorded higher academic performance than the central district that high rate of performance than the south. This was not expected given that Katsina central district is under the state capital and would expectedly received some level of adequate attention, execution and monitoring. The differences also could be due to variations in constraints severity in the senatorial districts.

The test of relationship using PPMC further revealed that constraint significantly correlated with pupils' enrolment, retention and performance levels except for retention level in the central senatorial district. The result is in tandem with that of Adekunle *et. al* (2016) who noted that School Feeding Programme in Osun State has failed to achieve its mandate because of various challenges.

CONCLUSION/RECOMMENDATIONS

Based on the findings of the study, basic educational status in Katsina State has witnessed pragmatic improvement. The levels of enrolment, retention and academic performance across the

three senatorial districts were high. Unfortunately, the programme was found to have been bedeviled by various constraints. These constraints included among others over-enrollment of pupils, ineffective supervision of cooking environment, ineffective supervision of food preparation and insufficient dining hall. In view of these, it is recommended that:

1. Efforts should be made by the government to improve and sustain the programme having yielded robust result in enhancing pupils' enrolment, retention and academic performance in the state
2. the quality and quantity of food should be enhanced to be in tandem with the enrolment rate and retention
3. More classrooms and dining halls should be build by the government to cater for the increased number of pupils
4. Contracted food vendors should be mandated to prepare and cook the food within the schools for proper collaborative quality control and supervision by teachers, headmasters and supervisors from Ministry of Education

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British Journal of Multidisciplinary and Advanced Studies:
Education, Learning, Training & Development 4 (2),171-186, 2023

Print ISSN: 2517-276X

Online ISSN: 2517-2778

Website: <https://bjmas.org/index.php/bjmas/index>

Published by European Centre for Research Training and Development UK

Acknowledgement

This study was financed by Tertiary Education Trust Fund (TETFund), Nigeria under its Institutional Based Research (IBR). We awesomely appreciate Tetfund efforts.