

## Demand, Supply and Utilization of Secondary School Teachers in Kabba/Bunu District of Kogi State, Nigeria

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**Abstract** *This study examined the demand, supply and utilization of secondary school teachers in Kabba/Bunu Local Government Area, Kogi State. Ten secondary schools were selected from the Local Government (comprising of three schools in urban areas and seven schools in rural areas), using stratified random sampling techniques. Nine teachers were randomly selected from teachers in senior classes in urban schools and six teachers in rural schools. Relevant data were collected through the use of highly structural and validated questionnaires, titled "Demand, Supply and Utilization of Secondary School Teachers (DSUSST)" and "Utilization of secondary school teachers (USST)". The research instrument was administered to selected secondary school principals and subject teachers respectively. The data were analyzed using simple percentage, mean, ratio, Pearson product moment correlation statistics and multiple regression analysis at 0.05 levels of significance. The result of the study revealed that there are inadequate basic science and English Language teachers in both rural and urban schools; there are no incentives for teachers in rural schools and 81 percent of the teachers are qualified. Based on the findings, it is recommended that supply of teachers should be carefully planned and properly executed while meaningful incentives like leave bonus, free medical treatment for teachers and their families, 15% basic salary as incentives for teachers in difficult terrains should be given to the teachers especially teachers in rural areas.*

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### Introduction

Education continues to be seen worldwide as the vital instrument for national development. Hence, most countries invest in education. Consequently, the place of the teacher as an essential factor for educational development is of prime importance. According to Abdulkareem (1997), despite the fact that our way of life are subject to constant structural, functional and technological changes, the teacher remain the key factor in the educational system.

Nowadays, most parents and guardians are more curious about the quality of education given to their children and wards in schools. Quite often, they show their concern by demanding that the schools should teach better than in the past. If quality instruction is to be maintained in schools, it becomes imperative to get the school adequately staffed with highly diligent and well motivated teachers (Afolabi, 2004).

As said by Momoh Tony, the former minister for information and culture, in the guardian newspaper (21<sup>st</sup> August 2008) "If you want to build a city, you must first build a man, and if you refuse to build a man, the kind of city he would eventually build might well be like some types of huts we used to have in some of the Nigerian villages today". The qualities of teachers in the secondary schools determined the quality of product that is produced in our secondary schools.

Kabba/Bunu Local Government Area is one of the sixteen Local Government Areas in Kogi State. It was cast out of the old Oyi Local Government Area of the then Kwara State in August 1991. It is amazing to note that the increasing enrolments in our secondary schools these days do not commensurate with the supply of teachers in such secondary schools. Of course, a great deal would have to be done with regard to teacher's salaries and conditions of service before we can expect to retain the right caliber of teachers in the profession. The low esteem in which teachers are put in Nigeria and their poor service conditions have generated the public slogan: "Teachers' reward is in heaven". Whether this slogan is used in mockery or in sympathy with the teachers, it strongly attests to the fact that teachers are possibly not adequately catered for in this country. To worsen the situation, some school principals do force their teachers to teach subjects they do not know or in which they were not previously trained. What obtains in such situations is that such teachers go into book to copy or dictate to students. It is erroneously believed by some people that anybody

can teach. According to the Federal Republic of Nigeria (2004, p.34), in the National Policy on Education, "Teacher Education will continue to be given a major emphasis in all our educational planning because no education system can rise above the quality of its teacher". The aim of teacher education is to produce personnel equipped with the knowledge of the subject matter and the teaching skills to teach in our school system. Education being the life wire of any nation for all facets of development should be quite alive and active. Many educationists and researchers believe that if enough quality teachers are adequately supplied and are effectively utilized, it would help to enhance the performance of the teachers that were employed to teach in various field of study. This would also help to achieve better students' academic performance and thereby could lead to the achievement of educational objectives. The level of academic performance in our secondary schools today could be attributed to the level or quality of teacher supply and utilization. The teacher demand, supply and utilization have significant roles to play in ensuring a successful implementation of effective educational planning programme. The fact that the teacher has a unique influence on student's academic performance is generally recognized, this makes the Nigerian government realize the importance of a teacher in achieving her laudable national goals and objectives (vision 2020) and also inculcating of national values to the citizens.

Ijaiya (1998, p.89) while writing on the supply of teachers in Kwara State Secondary Schools, said though teacher supply has always been a major problem in the state, the current economic downturn in the country may worsen the situation. Nwankwo (1999) viewed education wastage as inadequate utilization of teachers which resulting from dropout, repeaters, premature withdrawals, misguided types of education and non-employment of school leavers. Teacher utilization which could as well mean teacher performance cannot be effectively achieved if people do not embrace the profession with maximum interest and zeal to put in their best. However, over the years the teaching profession has been characterized by teachers of multifarious backgrounds, quality training and higher qualifications. With the emergence of the so-called greener pastures, the profession began to lose the best of its work force (Ciwar, 2004). It therefore followed that only those who could not get better jobs stayed on while new entrants to the profession used it as a stepping-stone. Worse still, others who were not trained, as teachers but had no other job went into the profession. In some cases, those trained to teach and are prepared to teach were not employed because employers especially the local and state governments preferred to hire unqualified teachers because they are cheaper to maintain. The teacher is charged with the responsibility of transforming the nation's education programme into reality. Hence, the teacher factors in terms of quantity, quality and utilization in our education programme should be periodically evaluated. Therefore, an investigation into the demand, supply and utilization of secondary school teachers in Kabba/Bunu Local Government Area would help in throwing more light on the critical areas of staff needs in the schools, and the extent to which the teachers are being utilized for maximum productivity.

### **Purpose of the Study**

The purposes of this study therefore were to:

- (i) examine the gap between demand and supply of secondary school teachers in Kabba/Bunu Local Government Area and the causes of the imbalances;
- (ii) identify the influence of imbalances on the demand and supply of secondary school teachers;
- (iii) examine the quality and relevance of teachers posted to secondary schools in Kabba/Bunu Local Government area;
- (iv) project the teachers demand between 2010 and 2020 (including annual requirement for the period);
- (v) identify roles of government and other bodies in the recruitment of qualified teachers to meet up with the increasing enrolment of the students;
- (vi) examine the level of teachers utilization;

- (vii) examine the extent to which the teachers are satisfied with their jobs and the efforts being made by the government and schools to direct and retain the teachers in the service for maximum utilization and
- (viii) suggest ways or methods by which teachers demand and utilization can be adequately met for improved teaching and learning activities in secondary schools.

### Research Questions and Hypothesis

This was based on the problem earlier set out in this study. The following questions and hypothesis formed the premises upon which data was collected, treated and analyzed.

#### Research Questions

1. What are the criteria used by the teaching service commission in supplying teachers to the schools?
2. What are the specific subjects that usually attract high demand for teachers?
3. What are the specific subjects that usually attract high supply of teachers?
4. What is the level of teacher's utilization in the schools?
5. What is the level of teachers supplied in relation to teachers demand in the schools?
6. Is there any difference in teachers supply between rural and urban areas?

**Research Hypothesis:** There is no significant relationship among demand, supply and utilization of secondary school teachers.

#### Sample and Sampling Technique

The target population for this study comprised of 15 public secondary schools in Kabba/Bunu Local Government Area, Kogi state. The sample consists of those schools that had been presenting candidate for senior school certificate examination (SSCE). Ten public secondary schools were selected using stratified random sampling techniques; which make up 66.67% of the sampled schools. The schools were grouped into urban and rural schools. Three schools out of four schools in urban areas were selected and seven schools out of 11 schools in rural areas were selected. Six subject teachers in rural schools and nine teachers in urban schools were drawn from the teachers teaching senior classes using random sampling techniques. A total of 69 subject teachers and 10 principals were used for the study.

#### Instrumentation

Two types of instrument were used to collect the data for this study. These were a questionnaire and records obtained at the Planning, Research and Statistics department of the Kogi State Ministry of Education.

A questionnaire titled "Demand, Supply and Utilization of Secondary School Teachers' Questionnaire (DSUSSTQ)" was given to the principals of the sampled schools for completion and "Utilization of secondary school teachers' questionnaire (USSTQ)" was administered to the sampled teachers in each of the sampled schools.

Checklist about the number of schools, teachers and student enrolment from Planning, Research and Statistics Department (PRS) in Kogi State Ministry of Education were also collected.

#### Method of Data Analysis

The analyses of the data collected for this study were done using descriptive and inferential statistics. The research questions were analyzed using simple percentage, mean, ratio and a generated formula to show

whether some of the questions should be upheld or rejected. The research hypothesis was analyzed using Pearson product moment statistic and multiple regression analysis at 0.05 level of significance.

## Data Analysis and Results

### Research Questions Analysis

**Question 1:** what are the criteria used by the Kogi State Teaching Service Commission for supplying teachers to the schools?

**Table 1:Criteria for supplying teachers to the schools**

Variables	Total Score	%	Ranking
Student Population	38	25.33	1 <sup>st</sup>
Location of school	29	19.33	3 <sup>rd</sup>
Principal's influence	38	25.33	1 <sup>st</sup>
Age of school	19	12.67	5 <sup>th</sup>
Statutory policy	26	17.33	4 <sup>th</sup>

Table 1 presents the criteria for supplying teachers by Kogi State Teaching Service Commission to secondary schools in Kabba/Bunu Local Government Area. The student population and the principals' influence in the teaching service commission are the basic criteria used in supplying teachers to the school which has a total score of 38 each; while age of school and statutory policy are not a significant factor in supplying teachers to the school. This is because they have a total score of 19 and 26 respectively. These criteria of supplying teachers to schools contributed to uneven distribution of teachers among secondary schools and also resulted to dishonesty, corruption and favoritism among senior or top public officers of the Teaching Service Commission in the supply of teachers to schools. That is why teachers supply to schools should be based on critical areas of need of each school rather than the principal influence in the Teaching Service Commission.

**Question 2:** what are the specific subjects that usually attract high demand for teachers in the schools?

**Table 2:Subject areas that attract high demand for teachers in the school**

Subject areas	Rural schools		Urban schools		Grand total	
	No.	%	No.	%	No.	%
English Language	7	100	3	100	10	100
Mathematics	7	100	3	100	10	100
Economics	4	57.14	1	33.33	5	50
Government	3	42.86	0	0	3	30
Physics	7	100	2	66.67	9	90
Commerce	1	14.29	0	0	1	10
Chemistry	7	100	2	66.67	9	90
Biology	6	85.71	1	33.33	7	70
Lit. in English	3	42.86	1	33.33	4	40
Prin. Of Account.	2	28.57	0	0	2	20

In Table 2, English Language and Mathematics are the subjects that have the highest demand for teachers in the schools with 100% each (both in rural and urban schools), followed by physics and chemistry which have 90% each but in higher demand in rural schools than in urban schools(100% in rural schools and 66.67% in

urban schools). It is shown that commercial and art subjects have little demand for teachers, for example commerce, Government and principle of account have 10%, 30% and 20% respectively; which are not demanded for in urban schools. Therefore, there is a high demand for teachers in English language and basic science subjects in secondary schools in Kabba/Bunu Local Government Area.

This is in line with Nuhu (2004) who said one of the most prevalent and easily identifiable problems found in teacher production, utilization and turnover pattern was the shortage of teachers in some subject areas. Production for years has been inadequate in some subject areas such as mathematics, physics, chemistry and technical subjects (p. 220).

**Question 3:** what are the specific subjects that usually attract high supply of teachers in the schools?

**Table 3:** Subject areas that attract high supply for teachers in the schools

Subject areas	Rural schools		Urban schools		Grand total	
	No.	%	No.	%	No.	%
English language	0	0	0	0	0	0
Mathematics	1	14.29	0	0	1	10
Economics	3	42.86	1	33.33	4	40
Government	4	57.14	2	66.67	6	60
Physics	0	0	0	0	0	0
Commerce	3	42.86	1	33.33	4	40
Chemistry	0	0	0	0	0	0
Biology	1	14.29	2	66.67	3	30
Lit. in English	1	14.29	1	33.33	2	20
Prin. Of Account.	2	28.57	1	33.33	3	30

Table 3 indicates that Government has the highest percentage of teacher supply in rural schools with 57.14% while Biology and Government have the highest percentage of teachers supply in urban schools with 66.67% each. It can be seen from the table that English Language, Physics and Chemistry have the lowest percentage of teacher supply both in rural and urban schools with 0% each; which shows that teachers supply is very low (inadequate) in mostly all the subjects being offered.

This finding was in line with the view of Dagana (2001) that stated that teacher supply has been a crucial issue in Nigeria's educational practices. Yet it has never received the attention it deserved.

**Question 4:** what is the level of teachers' utilization?

**Table 4:** Teaching periods of teachers in rural and urban schools

Teaching periods	Rural Schools		Urban Schools		Total teaching periods (urban & rural)	Average teaching periods (urban & rural)
	No. of tr	%	No. of tr	%		
1 – 9	2	7.14	5	11.9		
10 – 18	9	33.33	16	38.1	1,310	18.99
19 & above	16	59.26	21	50		
TOTAL	27	100	42	100		

It can be clearly seen from Table 4 that the teachers with over 19 teaching periods have the highest percentage of teachers both in rural and urban area with 50% and 59.26% respectively and they are having an average teaching period of 18.99.

**Table 5: Teacher/Student ratio in rural and urban schools**

No. of Students to one teacher	Rural Schools No. of tr %	Urban Schools No. of tr %	Total No. of trs	Average teacher/ student ratio
1 – 24	1 3.7	5 11.9		
25 – 40	5 18.52	20 47.62	3,249	1:47
41 & above	21 77.78	17 40.48		
TOTAL	27 100	42 100		

Table 5 shows that 77.78% of teachers in urban schools have a teacher/student ratio of 1:41 and above while 47.62% of teachers in the rural schools have a teacher/student ratio between 1:25 and 1:40; and 40% of their teachers have a teacher/student ratio of 1:41 and above. The average teacher/student ratio of secondary schools teachers is 1:47.09.

**Table 6: Teachers' number of committee in urban and rural schools**

No. of committee	Rural schools No. of tr %	Urban schools No. of tr %	Total No. of Committ.	Average No. of Committ/ tr
0 – 1	2 7.41	4 9.53		
2 – 3	15 55.56	24 57.14	225	3.26
4 & above	10 37.03	12 33.33		
TOTAL	27 100	42 100		

Table 6 shows that, 55.56% of the teachers in urban schools belong to two or three committees while 37.03% belong to four and above number of committees. 57.14% of teachers in rural schools belong to two or three committees and 33.33% belong to four and above number of committee. It can be seen that the average number of committee that teachers belong to is 3.26.

Using Tables 4, 5 and 6, the teachers' level of utilization for this study were measured using a generated formula below;

$$T_u = \frac{TP_{av}}{18} \times \frac{T/S_{av}}{40} \times \frac{C_{av}}{2.5}$$

Where  $T_u$  = Teacher utilization

$TP_{av}$  = Average teaching periods

$T/S_{av}$  = Average teacher/ student ratio

$C_{av}$  = Average number of committee;

While 18, 40 and 2.5 are constant, using the recommended teacher student ratio of 1:40 as the base line (NERDC, 1997).

$$\begin{aligned} \text{Therefore } T_u &= \frac{18.99}{18} \times \frac{47.09}{40} \times \frac{3.26}{2.5} \\ &= \frac{2915.22}{1800} \\ &= 161.96\%. \end{aligned}$$

The level of teachers' utilization using the three factors of teacher/student ratio, number of teaching periods and number of committee teachers belong to is 161.96%. Therefore, the secondary school teachers in Kabba/Bunu Local Government Area are over-utilized.

This situation has also led to the comments of (Ali, 2004) that "one is saddened to observe that the utilization of teachers, at the classroom level, in the primary and secondary schools of some states in Nigeria is too politicized that it can be characterized as less than adequate and deteriorating. The current over-all economic inertia that is strangulating Nigeria is not an excuse to under fund education but this has led to some misuse of primary and secondary school teachers and their trade unions"(p.5).

**Question 5:** what is the level of teachers supplied in relation to teachers demand in schools?

**Table 7:**Level of teachers supplied in relation to teachers demand in schools

Years	Teachers demand	Teachers supply	Differences	% of teachers supply to demand
2005	309	240	69	77.67%
2006	336	242	94	72.02%
2007	340	245	95	72.06%
2008	352	248	104	70.45%

Table 7 shows that the teachers demand in 2005 was 309 while its corresponding teachers supplied was 240 which has a difference of 69 which indicate that teachers supplied was 77.67% of its corresponding teachers demand which to an extent is high. Looking through the Table 9 shows that there is an increasing teacher's demand every year which is not proportionate to the teachers supplied. That is, the percentage of teachers supplied to demand is decreasing every year from 77.67% in 2005 to 70.45% in 2008.

**Question 6:** is there any difference in teachers supply to rural and urban schools?

**Table 8:**Teachers supplied to rural and urban schools

Years	Rural schools		Urban schools		Differences	
	No. of trs	%	No. of trs	%	No of trs	%
2005	101	42.08	139	57.92	38	15.84
2006	100	41.32	142	58.68	42	17.36
2007	106	44.17	134	55.83	28	11.36
2008	104	42.45	141	57.55	37	15.10

Table 8 indicates that the urban schools have higher percentage of teachers despite the fact that, seven schools in rural areas and three schools in urban areas are selected for this study.

Some secondary schools in the rural areas have seven teachers including the school principal which is not even enough for the senior classes alone.

### Research hypothesis:

There is no significant relationship among demand, supply and utilization of secondary school teachers.

**Table 9: Multiple regression analysis of relationship among Demand, Supply and Utilization of secondary school teachers**

Variables	Teachers demand	Teachers supply	Teachers utilization
Teachers demand	1.000	0.634	0.561
Teachers supply	0.634	1.000	0.852
Teachers utilization	0.561	0.852	1.000

Results in Table 9 show that the correlation coefficients of teachers demand and teachers supply is 0.634, while the coefficient relationship between teachers supply and utilization is 0.751 and the coefficient relationship between teachers demand and teachers utilization is 0.561. This means that the variables-demand, supply and utilization of teachers are inter-related. That is, the level of teachers demand affects its supply and the level of teachers utilization is also determined by manner and number of teachers supplied to schools, among other factors.

**Table 10: Multiple regression analysis on the relationship among Demand, Supply and Utilization of secondary school teachers**

Mode	DF	SS	MS	Cal. F-value	Critical F-value	Decision
Regression	2	231.32	1.891	11.34	0.243	Rejected
Residual	78	2884.2	10.14			

Table 10 shows that the calculated F-value of 11.34 is higher than the critical F-value of 0.243 at 0.05 level of significance and at 78 degrees of freedom which indicated that the hypothesis is rejected. That is, there is significant relationship among demand, supply and utilization of secondary school teachers in Kabba/Bunu Local Government Area, Kogi State. That is, demand for teachers, supply of teachers and utilization of teachers are inter-related and depend on one another. Therefore, the under supply of secondary school teachers in Kabba/Bunu Local Government has resulted into the Over-utilization of the teachers in the schools.

### Conclusion

Based on the findings of this study, the following conclusions were drawn:

The teacher is seen as a central figure among the various agents of education who see to the development and growth of a nation. For the school to accomplish its goals, a well balanced personality, highly satisfied, competent and motivated teachers must be adequately available in schools.

The imbalances in demand and supply of secondary school teachers in the local government had resulted to over utilization of the teachers, poor student academic performance and high rate of examination malpractices among students and teachers which brought about poor educational standard of secondary schools in Kabba/Bunu Local Government Area.



Lack of basic infrastructures and incentives for rural teachers which are "on paper only" does not encourage teachers to accept their postings to rural areas which have been a challenge in getting qualified and competent English Language and Basic science subject teachers in rural secondary schools in Kabba/Bunu Local Government Area.

## Recommendations

Based on the findings of this study, the following recommendations are made:

- (i) The teacher is responsible for transforming the nation's educational programme into reality. Hence, the teachers factors in terms of quantity, quality and utilization in schools should be periodically evaluated that is, the zonal inspectorate of the Teaching Service Commission in Kabba/Bunu Local Government should go round the schools to check if teachers in each school are adequate or not and to see if the right caliber of teachers is supplied to the schools.
- (ii) Teachers should be supplied to schools by the Teaching Service Commission based on the principals' request and critical areas of need in the schools rather than principal influence in the Teaching Service Commission.
- (iii) The conditions of service for teachers already on ground must seriously be overhauled with a view to retaining qualified teachers in the teaching profession and teacher utilization in the schools would improve.
- (iv) The community should work hand in hand with the school in the provision of educational facilities, employment of part-time teachers and creating job enrichment to teaching to enhance effective utilization of teachers.
- (v) All educational stakeholders especially the State Ministry of Education and Parent Teachers Association should strive to improve the standard of living of teachers in the rural areas by providing necessary facilities and regular payment of their stipulated incentives.
- (vi) There is need for more vigorous research that would identifies training procedures that can influence the production of effective teachers, in planned and predictable ways.
- (vii) All higher institutions that run a degree programme should focus more on the production of English Language and basic science teacher to teach in secondary schools.

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