The Social Sciences 2 (4): 431-435, 2007
ISSN: 1818-6125

Personnel and Physical Resource Utilization in South West Nigerian Primary Schools

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Abstract: This study investigated personnel and physical resource utilization in government-owned and financed primary schools in South West, Nigeria. The descriptive research design carried out Ex post facto was adopted in the study. The simple random sampling technique was used to 55 head teachers used for the study. Data obtained through a data collection format were subjected to statistical analysis to determine the Time Utilization Rate (TUR), Space Utilization Rate (SUR), Globar Utilization Rate (GUR) and Pupil Teacher Ratio (PTR). The Pearson product moment correlation coefficient was used to test the hypothesis raised at 0.05 level of significance. Findings from the study revealed that more qualified teachers and more female teachers were concentrated in the urban schools. The study also found out that over 50% of the school buildings in rural areas are in bad state, whiles some good buildings in the rural areas were not put into effective use. Library and laboratory facilities were found to be grossly inadequate. The study also found out that although there is a higher level of consistency in the distribution of teachers in the urban centers, teachers were grossly underutilized as manifested in low PTR. In view of the above, there is the need to reactivate people's confidence in public schools through making the schools to the "child-friendly". In addition, teachers should be fairly distributed among schools on the basis of sex, qualification and location.

Key words: Globar utilization, laboratory facilities, library facilities, pupil-teacher-ratio, quality education, resource utilization, space utilization, teachers, time utilization

INTRODUCTION

Education is a veritable tool for the development of human capital and hence a contributor to the sustainable economic and social development of a nation and its citizens. According to Brossard and Yattara (2003) "a minimum of six years of primary schooling is necessary to ensure that a good reading capacity is irreversible for the rest of a person's life". Primary education is therefore basic for sustainable educational development.

In recognition of the need to lay a solid foundation for a child, many parents prefer private schools to public schools in recent times. This may not be unconnected with overt loss of confidence in the public primary schools within the last two decades.

Nigeria, like some other Sub-Saharan African countries, is characterized by low access to basic education. The Editorial of The Punch newspaper of Wednesday, November 29, 2006 reported that Nigeria was prominent among nations with the largest number of out-of-school children in 2004. The report went further to reveal that in the recently released (UNICEF, 2007) Education for All Global Monitoring Report (1999-2004) 60% of pupils enrolled in Nigerian primary schools drop out before the last grade. This has culminated in perceived low literacy rate. According to Daniel (2003) Nigeria is among the countries that fall within serious risk of not reaching the goals of Education for All-with a net enrolment ratio of less than 80%. He further stated that, Nigeria is among the 20 countries with a serious risk of not achieving the Dakar goals of primary schooling, literacy and gender equality.

South West Nigeria seems to be ahead of others in the fact that Western education started in 1842 from Badagry, one of the towns in the region. The spread of western education to other areas of Nigeria was thus from South West Nigeria. In the same vein, the region has launched into the scheme of the Universal Basic Education (UBE) programme, perhaps with a view to maintain its lead in educational development. Education Trust Fund (ETF) buildings are being constructed to take care of the expected increased enrolment because of the UBE programme. It is however, worthy to note that dilapidated structures and abandoned buildings still

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abound in South West Nigerian primary schools. There appears to be empty classrooms in some cases and overcrowded classrooms in others. Is there any need for additional new buildings when seemingly unutilized buildings are found in some schools?

Aghenta (2001) lamented short supply of input resources at all levels of the Nigerian educational system. While corroborating the above observation, Adeyoju and Araromi (1997) had equally observed that "there are many primary and secondary schools both in urban and rural areas where lessons are held under trees and buildings without roofs".

Quality education is no doubt a function of the availability and utilization of input resources. The nature, sources, availability of human and non-human resources, according to Nwankwo (1979) may determine the efficiency of the school system. According to Abdulkareem (2003) "teachers in required quantity and quality, as well as materials for teachers and pupils in adequate number, must be available for use to ensure school success". Infrastructure poverty has been found to culminate in progressive and consistent deterioration in performance of both teachers and students (Bookcocks; 1982; Adeyoju and Araromi, 1997).

It is one thing for facilities to be adequately provided, it is another thing for such facilities to be effectively utilized. For example, Okunamiri (2003) found out that whereas facilities were adequately provided in selected schools in Imo State, these facilities there not effectively utilized.

It is against this backdrop that this study examined the extent to which the available personnel and physical resources are effectively utilized especially with the global inflationary spiral and dwindling financial allocations to the education sector. In view of this, the following research questions have been raised.

- To what extent are teachers equitably distributed?
- How adequate are the existing facilities in the schools of study?
- What is the condition of school buildings?
- To what extent are the classrooms being effectively utilized?

The following hypothesis has been generated:

- There is no significant relationship between the number of teachers and the number of pupils in the study area.

It is hoped that findings from this study, would provide a basis for devising measures to optimise the use of the available facilities in the primary schools. It addition, it is hoped that this study would assist school administrators and educational policy makers on how to achieve the goal of good resource management by maximizing benefits from the use of premises and physical facilities at minimum cost.

MATERIALS AND METHODS

The descriptive research design carried out Expost Facto was adopted in this study. The study population comprised all the head teachers of all public primary schools in South West Nigeria. The simple random sampling technique was used to 55 head teachers across the states in South West Nigeria. A data collection format tagged "Provision and Utilization of School Facilities in Primary Schools" (PUSFPS) was administered by the researcher and research assistants on the head teachers of sampled primary schools. This format was used to collect data relevant to the study such as number of buildings, pupil enrolment, number of teaching and non-teaching staff, designed capacity of classrooms, and number of periods/hours of teaching and other school activities. The data were analysed using simple percentage to calculate Time Utilization Rate (TUR), Space Utilization Rate (SUR), Globar Utilization Rate (GUR) and Pupil Teacher Ratio (PTR) in respect of Utilization of classrooms and teachers. The Pearson Product Moment Correlation coefficient was used to test the hypothesis raised in the study at 0.05 level of significance.

RESULTS AND DISCUSSION

Research question 1: To what extent are teachers equitably distributed?

Table 1-3 present teachers' distribution by qualification, sex and location as well as the pupil-teacher ratio in the selected schools.

Table 1 shows that 77.9% of teachers in the rural areas have NCE and above, while 22.1% are ACE and Teachers' Graded II certificate holders. In the Urban centres 81.5% are NCE holders and above, while 18.5% are

Table 1: Distribution of teachers by qualification and location

	Rural		Urban		Total	
Qualification of teachers	N	(%)	N	(%)	N	(%)
NCE and above	113	77.9	747	81.5	860	81
Others	32	22.1	170	18.5	202	19
Total	145	100	917	100	1062	100

Table 2: Distribution of teachers by sex and location

	Rural		Urban		Total	
Sex of teachers	N	(%)	N	(%)	N	(%)
Male	61	42.1	303	33	364	34.3
Female	84	57.9	614	67	698	65.7
Total	145	100	917	100	1062	100

Table 3: Pupil-teacher ratio in selected states

States	Pupils	Teachers	PTR
Lagos	4758	322	15:1
Ekiti	2168	213	10:1
Ogun	3619	254	14:1
Oyo	2478	163	15:1
Osun	1794	110	16:1
Total	14817	1062	14:1

Table 4: Adequacy of facilities

	Laboratories		Libraries	
Location of Schools	AV(%)	NA(%)	AV(%)	NA(%)
Urban	-	44(100)	4(9)	40(91)
Rural	-	10(100)	1(10)	9(90)

Notes: AV = Available, NA = Not Available

Table 5: Condition and use of available school buildings

	Good and used	Good not used	Bad and used	Bad not used	Total
Urban	91(47.6%)	14(7.3%)	62(32.5%)	24 (12.6%)	191(100%)
Rural	12(48%)	-	9 (36%)	4 (16%)	25(100%)

holders of ACE and Teachers Grd II certificate. The table also reveals that there more qualified teachers in urban schools than in the rural schools on the basis of the policy of NCE as the minimum teaching qualification in primary schools. This disparity may perhaps be due to lopsided distribution of resources against the rural schools. It should be noted that there is no untrained teacher in South West Nigerian primary schools, since the minimum qualification held by of teachers in South West Nigerian public primary schools is Teachers Grade II certificate.

Table 2 shows that there are more female teachers than male teachers in both rural and urban primary schools. Female teachers constitute 65.7% of the rural teaching personnel. However, the table reveals that there are more female teachers in the urban schools (67%) compared with the rural schools (57.9%). More female teachers were found in the primary schools perhaps because of the inclination of the female gender to teaching. A higher female proportion was found in the urban schools perhaps because of the need to live with their spouses who work in the urban centres as civil servants or businesspersons.

A presentation of the Pupil-Teacher Ratio (PTR) in the selected states will be necessary as it helps to show the teachers' work load.

As shown in Table 3, the average pupil teacher ratio was 14:1 as against the official ratio of 40:1. This implies that teachers in the primary schools were underutilized since there were less pupils to a teacher than the official number in all the states. This agrees with the findings of Abdulkareem (2003) in Kwara state primary schools.

Research question 2: How adequate are the existing facilities in the schools?

Table 4 shows the level of availability of laboratories and libraries in South West Nigerian primary schools.

Table 4 shows that none of the sampled primary schools has a laboratory. The table also shows that only 5 of the primary schools (1 in rural area and 4 in urban area) have library facilities. This finding shows poverty of teaching facilities as noted by Adeyoju and Araromi (1997). The presence of more libraries in the urban schools is however, unexpected given the consistent concentration of efforts in the urban centres against the rural areas.

Research question 3: What is the condition of available school buildings in the study area?

Table 5 shows the deplorable condition of available primary school buildings. The table reveals that 52% of the school buildings in rural areas are bad while only 48% are good. In addition, the table shows that 54.9% of the buildings in the urban schools are good while 49.1% are bad. This is also an indication of rural neglect. It should also be noted that even in the urban centres, only 47.6% of the buildings are good and used. While 33% of the buildings are bad and used, 7.3% are good and not put into effective use. The presence of bad and used buildings in schools corroborates the observation of Aghenta (2001) and Adeyoju and Araromi (1997). In addition this calls for the need to renovate the existing bad and dilapidated buildings. In addition, the efforts of the ETF/UBEC to provide sturdy structures to arrest this situation are notable. However, there is need to beef up enrolment bearing in mind the low PTR and the presence of unused buildings.

Research question 4: To what extent are the classrooms being effectively utilized?

Table 6 presents results of the computation of the Time Utilisation Rate (TUR), the Space Utilisation Rate (SUR) and the Globar Utilisation Rate (GUR) used to determine the extent to which classrooms are effectively utilised.

Time Utilisation Rate (TUR) "is the ratio between the number of hours (or periods) during which a class is put into use per week and the theoretical number of hours or periods available per week by convention" (Owolabi, 1990).

$$\text{Mathematically: TUR} = \frac{\text{Actual no. of hours of use}}{\text{Theoreical no. of hours}} \times 100$$

Table 6: Utilization of classrooms

States	Designed capacity	Actual capacity	Official time (h)	Time used (h)	TUR %	SUR %	GUR %	Remarks
Lagos	35	15	15	11.67	77.8	43	33.5	Under utilisation
Ekiti	35	10	15	11.67	77.8	29	22.6	"
Ogun	35	14	15	11.67	77.8	40	31.1	"
Oyo	35	15	15	11.67	77.8	43	33.5	"
Osun	35	16	15	11.67	77.8	46	35.8	"
Average	35	14	15	11.67	77.8	40	31.1	"

Key: Global Utilization Rate (GUR) > 100% implies overutilisation, GUR = 100% implies effective Utilization, GUR < 100% implies Underutilization

Space Utilisation Rate (SUR) "compares the average size of the sections occupying a room (average number of students in a classroom) and the theoretical capacity of the room (average number of seats in the classroom)" (Owolabi, 1990). This is represented thus:

$$SUR = \frac{\text{Average number of students in attendance}}{\text{Actual number of student places available}} \times 100$$

Globar Utilisation Rate (GUR) is derived from the TUR and SUR. It gives the ratio between the number of student hours occupied and the theoretical number of student hours available (Owolabi, 1990).

$$\text{Mathematically, GUR} = \frac{\text{Average no. of students in Attendance}}{\text{Actual no. of student places available}} \times \frac{\text{Actual number of hours of use}}{\text{Theoreical number of hours of use}} \times 100$$

The GUR is an index of how much underutilised or overutilised a school classroom is.

Table 6 shows that in South West Nigerian public primary schools, classroom facilities were grossly underutilized. The GUR ranged from 22.6% in Ekiti State to 35.8% in Osun State. On the average, the GUR was 31.1%. This finding agrees with the findings of Okunamiri (2003) that classroom facilities in selected secondary schools were underutilized.

Hypothesis testing: The hypothesis states that: There is no significant relationship between the number of teachers and the number of pupils in the study area.

Table 7 presents the Pearson Product Moment Correlation Coefficient for rural and urban schools.

Table 7 shows a high and low correlation between number of teachers and pupil enrolment in urban and rural areas, respectively. By implication, there are variations in the way teachers are distributed among rural and urban schools. The correlation coefficients showed that there is higher consistency in the way teachers are distributed among schools in the urban areas than in the rural areas.

Table 7: Correlation coefficient of teachers and pupil enrolment

Location	N	r_{cal}	r_{tab}	Remarks
Rural	11	0.3418	0.602	Low : NS
Urban	44	0.6816	0.304	High : S
All	55	0.59	0.276	High : S

The table also shows that a significant correlation (r = 0.59) existed between the number of teachers and pupil enrolment in the selected primary schools.

The correlation coefficient between teaching strength and enrolment is however less than what was recorded in primary schools in Guinea (0.92). According to Brossard and Yattara (2003) there is a good level of consistency in the way teachers are distributed among schools in Guinea's system compared with other countries.

CONCLUSION AND RECOMMENDATIONS

This study examined personnel and physical resource utilization in urban and rural public-owned primary schools in South West Nigeria. The study found out that quality teachers abound in the schools. However, more qualified teachers and more female teachers were concentrated in the urban centers. In addition, whereas over 50% of school buildings in rural schools are in bad state, there are good buildings in the rural areas that have not been put into effective use. Library and laboratory facilities were found to be inadequate. The study also found out that although there is a higher level of consistency in the distribution of teachers in the urban centers, teachers are grossly underutilised as manifested in low PTR.

In view of the implications of the foregoing for efficient resource use and efficiency of the system the following recommendations are considered necessary.

- Teachers should be fairly distributed among schools on the basis of sex, qualification and location.
- There is need for enrolment drive to public schools to curb underutilization of teachers and to put 'idle' buildings into effective use.

- As a corollary to the above, teaching resources, as well as library and laboratory facilities, should be provided for public schools in order to improve teaching and learning and thus reactivate people's confidence in public schools.
- Dilapidated buildings in rural schools should be repaired and be put into effective use.
- Instructional materials should be fairly distributed among rural and urban schools.

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