



Centralization and decentralization of schools' physical facilities management in Nigeria

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Abstract

Purpose – This research aims to examine the difference in the availability, adequacy and functionality of physical facilities in centralized and decentralized schools districts, with a view to making appropriate recommendations to stakeholders on the reform programmes in the Nigerian education sector.

Design/methodology/approach – Principals, teachers, members of the board of education including parents and community leaders were surveyed from centralized and decentralized school districts on availability, adequacy, and functionality of schools facilities.

Findings – Emerging data revealed that decentralization enhances the availability, adequacy and functionality of schools physical facilities.

Research limitations/implications – The implication of the findings is that decentralization is a more efficient method of managing schools' infrastructure because it promotes accountability and reduces official corruption in schools administration.

Originality/value – Findings from this research provide practical solutions to the problem of physical facilities inadequacy in the Nigerian school system.

Keywords Educational planning and administration, Schools, Nigeria, Decentralized control

Paper type Research paper

Introduction

This study examined the difference in the availability, adequacy and functionality of physical facilities in centralized and decentralized school systems, with a view to making appropriate recommendations on the ongoing reform programmes for the Nigerian education sector. Key studies (Ejiogu, 2004; Obanya, 2000; Ogbodo, 1998; Ikoya, 2005) on current reform programmes in education have demonstrated that, the availability, adequacy and proper functioning of schools' physical facilities is fundamental to the effectiveness and efficiencies of schools. Understandably, a substantial share of annual budgetary allocation to education, at the national, state and local levels is earmarked for the provision, management as well as maintenance of schools' infrastructural facilities.

Studies have shown (Ogunsaju, 1998; Ehiometalor, 2005; Nwadiani and Igbineweka, 2005) that in school systems where these resources are properly managed, substantial benefit accrue to schools by way of high productivity and reduced student wastage. But in some other school districts, particularly those without clear policy on physical facilities

This study was partly funded by a grant from Premik Educational Development Foundation.



management, the outcome of such huge investments hardly yield any profitable dividend to the schools. Many schools in such districts suffer perennial shortage of school facilities (Nwadiani, 2000a, b) poor academic performance (Adeyemi and Igbineweka, 2004; Bassey, 2000; Akpan, 2000), high level of indiscipline and wastage (Ikoya, 2002).

Generally many school heads, who are managing these schools, with inadequate facilities, complain of poor funding. Others talk about untimely release of fund but most view it as a problem of poor management of available resources because of existing dysfunctional school resource management policies and structures (Ikoya, 2000a, b, c). Indeed, several empirical and related studies (Ikoya, 2000a, b, c; Ejiogu, 2001; Adewale, 2000; Aghenta, 2000; Yoloye, 2000) appear to show that non-availability of physical facilities in many schools may not necessarily be due to inadequate fund, but to inefficient management of available funds. Several recommendations (Ehiametalor, 2000; Nwadiani, 2000a, b; Ogunu, 2000) have accordingly been made for further research on more appropriate strategies for effective management of schools' physical facilities to enhance their availability.

In response to these calls, researchers have looked into how communities (Iganiga and Ogieriakhi, 2003; Akinwumi, 2003) and non-governmental organizations' (Badmus, 2001; Ochu, 2001) participation in the provision and management of physical facilities could enhance their availability, adequacy and functionality. These studies have however provided minimal impact probably because they fail to address existing structural deficiencies that could impede proper management of schools physical facilities. Attempt is accordingly made in this study to examine some of the perceived policy issues associated with schools' facilities management.

Being the first in a series of proposed research studies designed to elucidate structurally related problems to schools infrastructural management, this maiden study logically examined the broad bands of centralized and decentralized management structures on availability, adequacy and functionality of schools facilities. Thus, selected local education committees (school districts) with centralized and decentralized management structures were sampled with a view to determining whether or not schools' physical facilities were better or equally managed in centralized and decentralized school systems. A major assumption of the study is that availability, adequacy and functionality of school physical facilities would be dependent on effective and efficient schools' management structure.

Conceptual framework

Decentralization as conceptualized by Bray (1991) and Hawkins (2004) involves authorization of lower (subordinate) levels in an organizational hierarchy to take decisions regarding the utilization of organizational resources. Decentralization has been well examined by several scholars including (Rondinelli, 1983; Peretomode, 1990; Cheng, 1997; Ejiogu, 2004) and from the existing literature; three key forms of decentralization are discernable. These are deconcentration, delegation and devolution. With devolution (Bray, 1991, p. 375):

Powers are formally held by local bodies, which do not need to seek approval for their actions. They may choose to inform the centre of their decisions.

This assumption presupposes that in the provision and management of school facilities the school principal and her team (referred to here as school management team (SMT)), at the building level, should be given freehand to manage schools' infrastructural

resources. In other words, budgetary provisions for the procurement, management and maintenance of facilities should be, disbursed to SMT, who in turn could be held accountable to the community for efficient resource management.

The current position, in the Nigerian decentralization experience, appears very cloudy and unclear. Even in some of the decentralized school districts, methods adopted for the management of school infrastructural funds vary from one region another. There are a few reports, that even in schools that may be conceptualized as well decentralized, funds allocated for the management of schools facilities are not always released to principals and their school's management teams, to be administrated in accordance with pressing infrastructural needs of the school. Students of decentralization reforms argue that with this model, principals are accountable to their staff, parents, community as well as the Ministry of Education thus enhancing judicious use of school funds.

The centralized model (Adesina, 1987; Irondi, 1992; Ejiogu, 2004) differ by ways of fund allocation and disbursement. In the centralized model, budgetary allocation for schools facilities management remains with the Central (federal or state) Ministry of Education. These central agencies may in turn devolve schools' facilities management functions to any of their parastatals, but never directly to the school. For example, at the federal level, such functions are devolved to the National Primary Education Commission (NPEC) while at the state level, the State Primary Education Board (SPEB) is charged with schools' infrastructural management functions.

Thus, the management of schools' facilities is devolved to NPEC by the Federal Ministry of Education, or to the SPEB at the state level, who award contracts for the provision and management of schools facilities.

Both the centralized and decentralized structures appear currently plagued with problems of accountability because of the nature of Nigeria's political terrain (Nwabueze, 1993; Cholom, 2006).

Constitutionally, Nigeria is supposed to be a federation of 36 states with 774 local government authorities. Unlike many other federating units of the world, where the individual states enjoy some good measure of autonomy, the states in Nigeria are more or less "colonies" of the federal government. Because of many decades of military rule, national government policies in Nigeria are viewed and taken as always superior to state government policies. Similarly, state provisions are accepted as superior to local government laws. Therefore, the NPEC or the SPEB, to which functions of schools' facilities management is deconcentrated not only see themselves as superior to principal, staff and even community members who own the schools but are equally accepted to be superior by these organs. With this wrong impression in place, these federal and state agencies refuse to be accountable to the local community who own the schools or to the principals and teachers that manage the schools. Worst still, contractors of much lower socio-economic status than school principals that are appointed by commission officials refuse to take instructions from school heads and community leaders, in the provision and management of school facilities in their domains.

The implication is that contracts awarded for the provision and management of schools physical facilities are executed without due regard to existing guidelines for efficiency and effectiveness. Opponents of the centralization model further argue that because of poor supervision, and sometimes non-supervision, most facilities in centralized school systems are poorly maintained resulting in inadequacy, non-functionality or outright non-availability of infrastructure.

Background

Nigeria was a British colony therefore, at the time of political independence; its educational system was patterned along the lines of the British model of education. Previous research (Ikoya, 2007, 2005; Itedjere, 1997; Thompson, 1983) have adequately addressed notable changes in Nigeria's educational development from pre-colonial era to 1960 when Nigeria became an independent nation and from 1960 till 1999 when civil rule was finally restored in the country. Surveys of some of these studies (Fafunwa, 1974; Ibukun, 2004; Nwosu, 2005; Ikoya, 2000a, b, c, Fayam, 2003) show that the period 1960-1999 witnessed intermittent shortages of physical facilities in schools. Research findings by notable scholars (Idama, 2003; Adinnu, 2003; Okundaye and Amulaya, 2003; Ayeji, 2003) reveal acute shortage of facilities, particularly during military rule which covered over 85 per cent of Nigeria's post-independence rule. In examining the shortfall of schools physical facilities during the military rule Daku (1987, p. 165) averred that:

Teachers taught in poor classrooms without furniture; in some cases classes held under tree shade devoid of teaching/learning equipment [...]

That era is rightly humored as the "Tarzan age" in Nigeria's educational development. There are further reports (Daku, 1987; Edukoghho, 2006; Okeke, 2000; Esiere, 2003; Ikoya and Tabeta, 2004) that both elementary and secondary school children bought their own chairs and desks and carried them on their heads to and from school daily. Some of these children walked over 2 kilometers to and from school with these loads, under poor nutritive and health conditions. The poor who could not afford this furniture used floor mats or sat on bare floors to learn. Lamenting the state of physical facilities in the Nigerian school system Ojala (2003, p. 156) says:

Classes are overcrowded ten times the required number of students in such a class. In a situation where you have between 100 and 300 students in a class, how effective do you expect such a teaching. Apart from over crowdedness, most classes are without basic infrastructure. Seats are not enough for students, classes are poorly illuminated and in very poor sanitary condition.

Different political leaders, military, paramilitary and non-military rulers have constantly complained of non-availability of fund for the poor state of infrastructural facilities in the nation's schools system. Only very recently (Ajayi, 2006; Mohammed, 2006; Ajayi *et al.*, 2006), the political leadership is hopefully attempting to look at corruption as a probable factor in the shortfall of schools physical facilities. The major national revenue accruing to Nigeria is from petroleum resources. Over the years, the nation has been characterized by acute struggle between the national and state governments for control of this resource. In recent times even the oil producing communities, anchoring on the principles of decentralization, have also joined the struggle for resource control. Currently, the revenue sharing formula is as shown in Table I.

	Per cent
Federal government	48.5
State government	24
Local government	20

Table I.

In addition there is now 2 per cent set aside for ecological fund, 1 per cent for the development of the Federal Capital Territory and 13 per cent derivation for oil producing states. In adopting the concept of decentralization for effective management of the 13 per cent derivation fund, 50 per cent of the fund is devolved to local communities and villages. This method appear to have restored peace to local oil producing communities, because they now see themselves as part of the resource management team, having positive impact in their communities. Thus, decentralization is enhancing effective management of the nation's petroleum resource fund at the local, community and village levels.

Nigeria is ranked as the fourth largest oil producing OPEC nation. In the last decade Nigeria earned close to \$100 billion (US\$) from oil revenue export alone (Ikoya, 2005; Ujah, 2006). And conservative projections show that in this decade Nigeria would earn well over \$144 billion (US\$) from crude oil export alone and almost similar extra earnings from natural gas. Yet survey show that less than 2 per cent of the nations public school pupils have access to computer education and less than 0.08 per cent of post secondary students have institutional access to internet services. Stakeholders in education are unanimous that non availability of fund cannot be an acceptable reason for poor infrastructural facilities.

These shortfalls informed the concern of parent and education managers particularly the Academic Staff Union of Nigerian Universities for urgent improvement in the management of school resources. Calls from different pressure groups made political leaders in 1999 to pledge on the need to address the problems of physical facilities in the nation's school system. (Ahiuma-Young, 2006). Upon inception of administration, and in attempt to make good their pledges, government awarded several contracts for the supply of physical facilities to the schools. New classrooms were built, old and dilapidated ones were renovated, benches and desks procured and sandcrete walls were built around most schools. In addition, school libraries were renovated and supplied with books, more toilet facilities were built and laboratory instruments and reagents were once more available in schools.

In short, the schools were once more made alive, and both teachers and students were motivated to teach and learn, under conducive atmosphere. Unfortunately, this was short lived.

Management problems

Despite the huge investment made in 1999 for the provision and management of schools facilities, many schools currently lack adequate facilities for effective teaching and learning. The reason being, contracts awarded for the provision and management of schools facilities, were done without proper planning. Durosaro and Ogunsaju (2000) and Ehiamentalor (2005) report that many contracts were awarded to non-professionals who lacked fundamental knowledge of quality education materials. That both the federal and state governments including their parastatals awarded contracts for the supply and erection of educational structures indiscriminately. For example, Nwaokobia (2006) and Ehiamentalor (2005) reported that in some instances contracts for supply of facilities to a particular school could be awarded to three different suppliers by the three different tiers of government at the same time. The result was there were extra chairs and benches without classrooms to accommodate them in some

schools while other schools lacked this furniture. Many were left outside to be destroyed by heavy rains.

One major factor critics alleged to be responsible for the failure of the programme was ineffective and sometimes outright non-supervision of projects executed by contractors. In examining, the contributions of schools administrators to the management of school facilities in Nigeria, Akinsalu (2004) and Nweke (1992) stated that, the program failed, probably because of non-involvement of principals, and their SMTs. Four major projects areas executed by contractors in the 1999 school improvement programme include:

- (1) erection of sandcrete walls around the schools;
- (2) constructing new classrooms and renovating existing old structures;
- (3) provision of teaching materials such as library books, computers and chairs; and
- (4) supplies of laboratory instruments, reagents and other consumables.

Umoru-Onuka (2003), Akinsalu (2004), Ayodele (2005), Otunu-Ogbisi (2002) and Fabunmi and Akinwumiju (2003) argue that principals were not involved in the award of contracts or the supervision of building projects and the provision of materials for their schools. Accordingly, it is argued that in absence of effective supervision, contractors performed very poor jobs. A survey of teachers similarly shows that since school principals were neither authorized nor permitted to correct or sanction erring contractors, and since the contractors were not accountable to the school authority, there was no provision for accountability that could guarantee good work.

Consequently, contractors that supplied benches, chairs, computers, library and laboratory materials, allegedly bought very poor quality materials and instruments for the schools. In consonance with this assertion many teachers in different school districts asserted that walls erected began to crack in no time and roofs leaked in less than one year because of poor supervision. Most benches, chairs and tables were damaged and abandoned, and since funds were allegedly not made available to school principals for infrastructural facilities management, they remained dilapidated. Some principals made frantic efforts to raise money from PTA and donations from public spirited individuals (Jimoh, 2005; Oluchukwu, 2005; Ikoya, 2005; Okoroma, 2005) for schools facilities repairs but such funds were usually inadequate (Orofuke, 2006; Uzoka, 2005; Olaniyan, 2003) to effect adequate repairs of schools structures and facilities. Today, stakeholders in education are anxious and worried (Ukeje, 1986; Durosaro, 1997; Jimoh, 2005; Etuk, 2005; Fafunwa, 2001) that another eminent and total collapse of schools physical facilities could reoccur, unless urgent steps are taken now, to avert it by sincerely addressing current inadequacies in the management structures and policies of schools infrastructural facilities.

School management team decentralization model

In attempt to proffer administrative solution to current inadequacies in schools infrastructural facilities a more all-inclusive decentralization model that would integrate school principals and members of their SMTs has been suggested. Review of existing literature (Raji, 2005; Onweume, 2001; Ojerinde, 1998; Ejiogu, 2004) shows that such a model could be centered on individual SMTs, under the leadership of the principal.

Members would include a few selected members of the board of governors of the school, selected administrative staff of the school and representatives of the local education board.

The idea is to have school principals and these decentralized management teams actively involved in the management of school physical facilities right from the early stages of policy formulation and execution to evaluation. Proponents of this model further argue that the best way of ensuring effective supervision of schools projects is to devolve such functions to SMTs, rather than government contractors. Not all stakeholders however agree with this proposed decentralization programme.

Opponents of the school management team decentralization model argue that Nigeria has for quite sometime now embarked upon reform programmes in different sectors of the nation's economy, particularly in education.

Government, in the process has devolved several school management functions to local, districts and even village units (Peretomode, 1992; Babalola, 2003). In addition, they point out, that there has been massive ongoing privatization programmes in the education sector. They contend that there is no evidence to show that schools' physical facilities are better managed in centralized or decentralized schools (Ironidi, 1992; Jayeoba and Atanda, 2005). Empirical data are actually not available to show whether or not schools physical facilities are more, available and better functional in centralized or decentralized schools. Perhaps, an answer to this question could help throw more light on the preferred management structure that would enhance the availability, adequacy and functionality of schools physical facilities in Nigeria secondary schools.

Statement of problem

With the current wave of democratization sweeping across the sub-Saharan Africa, in addition to the ongoing globalize "war" against corruption and bad governance, stakeholders in education are becoming more accountable to education consumers. Even in developed economies, there are reports (Cybulski *et al.*, 2005) that many state school funding programmes are under legal scrutiny to ensure accountability. In Nigeria, current reform programmes are devising improved management techniques, both structurally and in policies to enhance efficient and effective utilization of resources, particularly school physical facilities. These reform programmes appear to have the main thrust of adopting improved management processes for service efficiency. Thus, in many states of the federation, educational management is well decentralized and others are steadily making attempts towards decentralization. But the contentious issue at hand is whether or not the devolution of schools facility's management to institutional level would enhance improved infrastructural management in the nation's school system. This is why attempt is, made in this study to examine physical facilities availability, in centralized and decentralized school districts with a view to determining which of the management systems enhances schools infrastructural availability, adequacy and functionality. Three research questions were asked:

RQ1. What is the availability index of physical facilities in centralized and decentralized school districts?

RQ2. What is the adequacy ratio of physical facilities in centralized and decentralized school districts?

RQ3. Is there a difference in the functionality index of physical facilities in centralized and decentralized schools districts?

Study objectives

The objective of this study is threefold:

- (1) to determine physical facilities' availability, adequacy and functionality in Nigeria secondary schools;
- (2) to find out whether or not there is a difference in the availability, adequacy and functionality of physical facilities in the centralized and decentralized school districts; and
- (3) find out which of the management structures, i.e. centralized or decentralized, enhances efficient and effective management of schools physical facilities.

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A major assumption of the study is that schools' physical facilities availability, adequacy and functionality is dependent on efficient and effective management of available physical resources. When resources made available for the provision and maintenance of schools physical facilities are inefficiently managed, these facilities would be inadequate for the children. Therefore, school systems with efficient and effective management (centralized or decentralized) strategies and policies would have more functional facilities. Consistent with this assumption, the researcher postulated that facilities would be more available and functional in centralized or decentralized school districts, depending on which of these management policy is more efficient for the management of schools infrastructural facilities. And in trend with current reports in the literature (Rondinelli, 1983; USAID, 1997; Hanson, 1989; Hawkins, 2004) associated with reported higher levels of efficiency and effectiveness in decentralized systems, we hypothesized that schools' physical facilities would be more available and functional in decentralized than in centralized school districts.

Methods

The study design is *ex post facto*, employing the survey method. About 120 secondary school principals from 72 centralized and 48 decentralized school systems were, sampled from the existing pool of secondary schools in the south-south geopolitical zone of Nigeria. The south-south zone was selected for this study because of its political, economic and cultural significance. Being the area generating the wealth of the nation, from crude oil, and therefore the economic hub of Nigeria, it is the nation's centre of economic activities. There exist different nationalities in the region, making the zone, Nigeria's melting pot. Historically the south-south geopolitical region has over 150 tribes of the 250 different tribes in Nigeria. The northern regions are, mainly Hausa/Fulani speaking, the western zones are mainly Yoruba speaking, while the eastern zones mainly speak Ibo but the south-south is multi ethnic, with all the major and minor tribes represented. Accordingly, the region is a better representation of the entire nation in terms of economic, political and cultural diversity.

Sample

Special efforts and care was taken to build a well representative sample. Therefore, schools in urban, sub-urban and rural environments were represented. Additionally, both public and private, single sex and co-educational institutions were sampled.

Consistent with current population of centralized and decentralized schools in the study zone, 40 per cent of the study sample was drawn from decentralized schools while 60 per cent was drawn from centralized schools.

Instrument

The survey instrument used for data collection consists of three sections. Section A pertains to respondent's demographic data. Conceptualizing Lam (2005) and Bogler and Somech (2005) model of contextual variables for demographic data, only closely related information necessary for the study were sought. These include job description, gender, school type (centralized or decentralized) and student population both in class and the school.

Section B sought for issues on key variables in the management of school physical plant. The questions focused on availability, adequacy and functionality of school facilities. Each physical item like classroom, chairs, classroom furniture, laboratory *et al.* was clearly identified in the instrument and participants responded as to whether or not the identified item, e.g. computer was available, adequate and functional. The scale followed a Likert-type design but it had the following codes:

- available, adequate and functional item – 5;
- available, inadequate and functional – 4;
- available, adequate but non functional – 3;
- available, inadequate and non functional – 2; and
- not available inadequate and non functional – 1.

Questions were randomly distributed in the questionnaire, intermixing positive and negative questions. The pattern was deliberately chosen to saliently compel the sampled subjects carefully and thoroughly answer all the questions. Hopefully, this method would enhance the validity of the responses and consequently the instrument.

Section C examines schools management teams' participation in related decisions on schools infrastructural management. Answers were sought on the involvement of principals, teachers, PTA members, private citizens, contractors, local community members and state government officials in the management of school facilities. Upon completion of the instrument, a team of expert was constituted to carefully examine the instrument for face and content validity. Its reliability was established at $r = 0.86$ using test – retest method. There after the instrument was pilot tested before being used in this study.

Data collection

Data relating to student population, physical facilities such as classrooms, furniture, library and laboratory materials were obtained from the school principals during scheduled visits. Most of the required records were available in updated conditions with the vice-principals (administration) or some other delegated academic staff. Some of the principals were kind enough to schedule our meetings for 1-2 hours after regular school hours to allow for uninterrupted discussion. Armed with our survey instrument the investigator with his trained (eight weeks training) assistants collected the data, either from the principals or the designated officer in charge of records on schools infrastructural facilities. To ensure that the data collected were accurate, the researcher

cross checked recorded data with the facilities on ground and where disparity is observed, the attention of the records' officer was drawn for explanation, update and reconciliation. In addition, teachers, students and community members were surveyed and interviewed.

Measures

Physical facilities availability index. The availability index for schools' physical facilities was determined by a 17-items sub scale which includes measures on available classrooms, library materials, laboratory equipments, computer laboratory, school bus *et al.* The index was calculated by computing the ratio of schools having an item to the total number of sampled schools. For example, if 60 schools were sampled on the availability of computer laboratory but only seven schools had, the availability index, $AV 1 = 7/60$ or 0.12 for computer laboratory.

Physical facilities adequacy. In determining the adequacy of physical facilities, the index was computed by dividing available facility by the population using that particular item. For example, in some of the classrooms sampled there were 110 students in a room with 29 seats. The adequacy ratio for seat is therefore $29/110 = 0.26$. Government's legally prescribed – adequacy ratio for seats in the classroom is 40 seats to 40 students or 1:1. An adequacy index of 0.26 is therefore very low and highly inadequate.

Physical facilities functionality index. Physical facilities functionality index was computed from the originally listed 17-item sub scale of classroom, laboratory equipment, school bus *et al.* The index was measured by ascertaining the number of functioning facilities over the total of such material that is available. For example, in a sampled school science laboratory, there were 38 microscopes but only 13 of these were in good working condition. The functionality index for microscope therefore is $13/38 = 0.34$. In view of the fact that less than 50 per cent of the microscopes are functional, it was agreed that the functionality index is low.

Results

Descriptive statistics

Comparative means for physical facilities availability, adequacy and functionality for centralized and decentralized schools is presented in Table II. Variability in the scores shows clear disparity between centralized and decentralized school districts.

Findings

Availability of schools' physical facilities

The mean scores for 17 tested variables on physical facilities availability; adequacy and functionality are presented in Table II. These data show variability between

S/N	Tested variables	Centralized school districts	Decentralized school districts
1.	Physical facilities available index	0.577	0.754
2.	Physical facilities adequacy index	0.415	0.689
3.	Physical facilities functionality index	0.619	0.732

Table II.
Variability in infrastructural availability in centralized and decentralized schools

centralized and decentralized schools. Of significant interest is the pattern of disparity along the centralized/decentralized line. The data revealed that physical facilities were more available in decentralized than in centralized school districts. For example, 94 per cent of sampled decentralized schools as compared to only 55 per cent of centralized schools had libraries. Similarly 71 per cent of the decentralized schools had laboratory equipments but only 36 per cent of the centralized schools had such equipments.

Adequacy of physical facilities

Finding from data presented in Table II show that the adequacy ratio of physical facilities for centralized and decentralized schools is low. As could be seen from the data, the mean adequacy ratio for physical facilities in centralized school district is 41.5, and 68.9 per cent for decentralized schools. For some key variables sampled the adequacy ratios were found to be much lower. For example, adequacy indices for schools bus, sickbay, electricity and computer laboratories are 0.18, 0.33, 0.47 and 0.16, respectively, for centralized schools. This result in consonance with previous finding: by Uwhereka (2005) and Aghenta (2000) which reveal inadequate facilities in Nigerian schools.

Functionality of physical facilities

An important aspect of this study was to determine from available facilities how many were functional. Data from this study reveal that the functionality ratio of physical facilities is relatively lower for centralized than decentralized schools. The level of maintenance of school facilities appears higher in decentralized than in centralized schools. Whereas, over 82 per cent of school buses, in decentralized districts are quite functional, less than 20 per cent, of school buses in centralized school districts, are in good working conditions. These findings are consistent with results from Ejiogu (2004) Adesina (1987) Ornelas (2000) which show that functionality of physical facilities appear enhanced by decentralization.

Data analyzed in this study show that the availability of physical facilities in Nigeria secondary schools, their adequacy and functionality are higher in decentralized than in centralized schools. Several reasons could account for this result. Firstly, in decentralized school districts, individual school heads or proprietors do the purchasing of equipments and materials for their schools. These transactions are more personalized than in centralized schools systems where contracts are awarded to third parties for purchases. Because of this personalized nature of transaction, school heads, of decentralized schools, buy quality material at very competitive prices. Again the extra cost which accrues to the third party (agent or contractor) for centralized purchases is saved by principals of decentralized schools.

Another important reason why adequacy ratio of physical facilities is higher for decentralized schools could be in the spirit of competition consistent with decentralization. Heads of each functional unit would want to be prudent in resource management. School heads, therefore, want to ensure that facilities are available for all the students to enable them perform well. These are some probable factors accounting for better schools facilities availability, adequacy and functionality in decentralized schools.

Discussion

Within the last six years, considerable, local (Longe, 2003; Nnennaya, 2003; Ajayi, 2005; Fabiyi and Bello, 2005) as well as international (Bray, 2003; Young, 2000) attention has been paid to the ongoing reform programmes in Nigeria educational system. Issues of quality, access, and school physical plant have been widely discussed. A few studies have also touched on the availability and adequacy of schools' facilities, but, a good percentage of these studies only tried to draw the relationship between adequacy of education fund (budgetary allocation to education) and schools infrastructural availability. The present study is a clear improvement on existing studies because, here, attempt is made to link proximal administrative variables to schools' facilities availability. A basic assumption of the study is that the availability, adequacy and functionality of schools physical facility are strongly hinged on efficient management of resources. Therefore, an important strategy to combat current inadequacies of physical facilities in Nigerian schools could be the adoption of a more efficient management system. Hence, this study tries to find out whether or not centralized or decentralized management strategy is the more efficient method, for managing schools facilities.

Whereas this author agrees with other scholars (Johnston and Thomas, 2005; Vasutheven and Hee, 2004; Seweje, 2004) that adequate funding is essential for the provision and maintenance of school plant and facilities, he subscribes more to the view that when these funds are not properly managed, schools' facilities may not be available in adequate proportion. The key question, therefore is, which management strategy (centralized or decentralized) would enhance efficient and effective management of schools physical facilities? Stakeholders in the Nigerian educational system are still divided as to whether the centralized or decentralized strategy should be adopted for schools facilities management. Result from this research shows that decentralization enhances effective management of school facilities.

So much attention has been paid to the decentralization programme of the Nigerian government within the last few years, and most citizens appear happy with the reforms. People are quick to point out that telecommunication was privatized and now Nigerians can "talk" with themselves and the rest of the world. Others argue that unless the energy sector is adequately decentralized, Nigerians will not have regular electricity supply. Very recently, Biam (2006) declared that efficiency and effectiveness has been restored to the Nigeria police pension scheme with decentralization.

In the education sector, there are regional as well as district and local disparities in the level of decentralization. Some school districts are well decentralized while others are still centralized. The situation therefore provides a good avenue for comparison as to whether or not physical facilities are better managed in centralized or decentralized schools. Since budgetary allocation for physical facilities in centralized or decentralized schools are equal, we believe that disparity in availability, adequacy and functionality of schools' infrastructure should be due to management system's efficiency. Therefore, facilities would be more available and better functional in a centralized school district if centralized management system is more efficient. If on the other hand, decentralized management system is more efficient, then there should be more functional facilities in decentralized schools.

In finding out whether or not school physical facilities were more available and better functional in centralized or decentralized schools, the availability index, adequacy ratio and functionality index of school facilities were calculated and

compared for the two school district types. Findings from data analyzed revealed that physical resource availability index for decentralized school district (0.754) was higher than for centralized school district (0.577). These results could also be interpreted to show that teachers are efficient managers of resources because school physical resources in the decentralized schools are procured by school heads and teachers, while for the centralized schools, contracts are awarded to external organizations for their procurement. Most parents interviewed believe that because of teachers' commitment and diligence, funds entrusted into their hands are judiciously used and properly accounted for, hence in many of the decentralized schools; materials were found to be available and functional. Many schools, particularly the decentralized urban schools have functioning air-conditioners in staff-rooms, well carpeted floors and properly maintained toilet facilities. Classrooms were well maintained with enough seats, such that two students are comfortably seated to a desk. During examinations only one student sat on a bench meant for three people.

In contrast to what was observed in the decentralized schools, the centralized schools had fewer materials available. Staffrooms in centralized schools were poorly equipped and furnished. Many learning and teaching materials were lacking in some of the sampled schools: students were poorly seated with as many as four or five students seated on a bench meant for three students.

Again, in terms of quality, schools infrastructure available in decentralized schools, were superior to those of centralized schools. Sampled opinions on the superiority of schools physical facilities available in decentralized schools, is summarized as follows:

- teachers know the best quality of materials appropriate for their lessons and they buy them;
- school heads and teachers are not concerned about profit making from these purchases but are only concerned about their students' interest; and
- the decentralized approach enhances accountability and minimizes corruption.

These were some of the adduced reasons why physical facilities are more available in decentralized schools. Since the SMT, involved in the procurement of school materials is knowledgeable about the needs of the schools, teachers and students quality materials appear purchased to adequately meet these needs. But in the centralized schools where facilities procurement is contracted to people outside the school system, many of the contractors were said to be ignorant of the latest and appropriate school technological resources. Even when they are current, and aware of the best or appropriate quality, parents believe that the quest for profit does not allow them to supply the best materials to schools.

The indices for schools facilities adequacy and functionality were also higher for decentralized than for centralized schools. The adequacy ratio for centralized schools district was 0.415 while that of decentralized schools was 0.689. Similarly, the functionality index for centralized schools was lower (0.619) than that of decentralized schools (0.732). Findings from sampled opinions of stakeholders revealed that many (78 per cent) are not favorably disposed to current supervision method of external contractors who procure school physical facilities for centralized schools. Currently, in the centralized schools, contracts for the construction of classroom buildings and procurement of facilities are awarded by the ministry of education, in the central office, far away from most districts. The contractor in many cases is a political party faithful

who could not be appointed into political positions. These contracts are therefore some of the avenues for rewarding them to make money for themselves. They go to school to execute these contracts without inputs from school heads and teachers. Report from stakeholders also shows that current policy of non accountability to school administration by contractors stifles the availability, adequacy and functionality of schools physical facilities. The feeling is that since contractors are poorly supervised or not supervised at all, there is the tendency for them to:

- procure less materials than the contract sum specified;
- procure low quality material that would quickly depreciate for purpose of profit; and
- encourage corruption and waste of financial resources because they pay so much money out to ministry official as bribe to enable them execute poor jobs without query (Rotimi and Habib, 2006).

These norms stakeholders contend are responsible for observed lower availability index, adequacy ratio and functionality index in centralized schools' system.

Conclusion and recommendation

The study examined the difference in the availability, adequacy and functionality of physical facilities in centralized and decentralized schools. Using data from observed physical facilities, individual school records, including a survey of principals, teachers, students and community members; a comparative analysis of the availability, adequacy and functionality of classrooms, classroom furniture, staffroom, office furniture, laboratories, libraries, computers *et al.* was done. Findings from the study reveal that:

- physical facilities are more available in decentralized than in centralized schools;
- the adequacy ratio of schools physical facilities is higher in decentralized than in centralized schools; and
- the ratio of physical facilities functioning in decentralized schools is higher than the ones functioning in centralized schools.

On the whole, the availability, adequacy and functionality of physical facilities are higher in decentralized than in centralized schools. Based on these findings, it was concluded that decentralization of physical facilities management enhances the availability, adequacy and functionality of physical facilities in schools.

It was therefore recommended that physical facilities management should be adequately decentralized to enable principals and teachers get actively involved in all policy aspects concerned with the provision, management and maintenance of schools' physical facilities. Finally, SMTs should also be actively involved in the monitoring and supervision of all purchases, construction and maintenance of schools' physical facilities to enhance accountability in line with on going global fight against corruption in developing countries. It is hoped, at some point in the future, that decentralization of schools' infrastructure would translate to availability and adequacy of facilities which would bring about better school outcomes, particularly student learning outcomes. Accordingly, it is suggested that more empirical studies be carried out in the areas of decentralization and schools improvement.

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Further reading

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