Contributions of School Plant Management Towards Teaching And Learning Process In Public Secondary Schools In Rivers State

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ABSTRACT
School plant management may have been given little consideration in the management of secondary schools. This could have attributed to their poor status as evidence in their deplorable state in Rivers State. The managers of secondary schools and the government have specific roles in school plant management which may have not been carried out in the daily administration of secondary schools. School plant management ensures that school facilities are effectively used to enhance teaching and learning with little or no interference of the teaching and learning process. Effective management of school plant could enhance their status in keeping them near their original state as possible. In this paper the concept of school plant, school plant management, and roles of government and school administrators in school plant management are examined. Conclusions are drawn accordingly for effective management of school plant in the teaching and learning process in pursuit of the goals of secondary education in Rivers State.

Keywords: School plant, educational planning, secondary education

INTRODUCTION
School plant refers to all the inclusive as material provisions in a school environment Njoku (2004) describe school plant as educational facilities that are tangible such as buildings, land equipment, machineries, furniture, fixtures and fittings which are put into use and capable of providing excellent educational services. Expressed in another way, Amanchukwu and Nwachukwu (2015) describe school plant as the school site, all the essential structures-permanent and semi-permanent such as machines and laboratory equipment and chalkboard needed for effective teaching and learning, other scholars have defined school plant in different perspectives. Yusuf (2008) stated that school plant is the space interpretation of the school curriculum. In this perspective, the curriculum will be impossible to implement if the physical facilities required for teaching and learning are neither available nor inadequately provided and maintained. School plant according to Alimim, Ehinola and Alabi (2012), are made up of indispensable systems and structures required by any educational system to function effectively and achieve the objectives for which it was established. The authors noted that since education seeks to develop the minds and character of future citizens, their abilities, skills and potentials must be nurtured to meet the needs of contemporary society. To do this, school plants have to be supplied in adequate quantity and quality and maintained effectively through thorough supervision. Walson (2015) noted that since school plant is sine qua non to the achievement of school goals; it is a primary function of government and top management staff down to non-teaching staff to ensure that school facilities are provided and effectively managed.
School plant therefore include the school site and all the facilities within the school which enhance the teaching and learning activities and at the same time protects the physical well-being of teachers and the learners for their effective performance in the educational system. It includes the totality of what is found in the school environment like; school compound, playfield, classrooms, office laboratories, libraries, furniture, fixtures and fittings, equipment, hostels, workshop, sickbay, toilets, generating plants, water system, fire extinguishers, and other structures which are integral part of the learning environment. Absence of school plant makes teaching and learning ineffective and undesirable hence their importance cannot be overemphasized in the educational system.

Discussing on the importance of school plant as a vehicle for effective teaching and learning, Asiyai (2012) and Odufowokan (2011) asserts that school plant occupies a premium place among other factors which impinge on students’ achievement in the educational system. Therefore, the quality of teaching and learning in schools as a predictor of students’ performance is contingent upon the availability and adequacy of school plant.

Concept of Management

Management is the process of getting things done through the use of human and material resources. Olga (2011) described management as a process of coordinated activities involving planning, organizing and directing the activities of an organization to determine and accomplish stated objectives with the use of human and material resources. The United Nations Educational Scientific and Cultural Organization (UNESCON cited in Ogunu (2000) described management as a social process designed to ensure cooperation, participation, intervention and involvement of others in the effective achievement of predetermined objectives of an organization. In the view of Peretomode(1996), management is a process involving a sequence of coordinated events like planning, organizing, coordinating, controlling and directing or leading in order to use available human and material resource to achieve desirable outcomes in the fastest and most efficient way. From these definitions, it is deduced that management is a social process by which organizational goals are achieved through planning, organizing, leadership and coordinated efforts of human and material resources. Thus, management in this context is about the planning, organizing, coordinating and stimulating available human and material resources in public secondary schools towards enhancing the sustenance of school plant in order to achieve desired school objectives.

Planning here has to do with decision making. To plan is to decide in advance what is to be done and how to do it. The importance of planning in the management of school programmes (school plant inclusive) according to Olagboye (2004), is to decide in advance the objectives to be achieved in the school and how to utilize available resources in achieving the set objectives. The functions of planning consist of establishing objectives, programming, scheduling, budgeting developing procedures, and establishing and implementing policies within the secondary school system. Olagboye noted that virtually all various programmes and activities in school should be planned; and urged the government and principals in collaboration with teachers and non-teaching staff to be involved in planning for an effective school plant. Planning for school plant involves arranging for periodic checks, cleaning, replacement of worn out parts, and other forms of maintenance.

To make school plant planning effective, principals should endeavor to involve as many teaching and non-teaching staff as possible in formulating and implementing plans since people tend to avoid implementing plans they were not involved in the formulation. Besides, school plant plans should be flexible as possible to accommodate changes which may occur from time to time. This is geared towards efficient management of school plant and other activities aimed at achieving school objectives.

School plant planning according to Oyesola (2013), is an integral part of the overall educational planning, where desired facts and information are collected and decisions taken to enable school authorities enunciate objectives and determines the pattern of action to achieve the objectives. Reiterating the importance of school plant planning, Oyesola (2013), further noted that planning encourages innovation, mind-stretching and search for more and better alternatives towards achieving state objectives. Planning therefore reconciles objectives, opportunities, and capabilities and lends itself as a factor for selecting targets and means of achieving those targets. School plant planning is needed in the educational system in
order to avoid frustration that may arise in the absence of adequate planning. As an aspect of school plant management, school plant planning is seen to center around curriculum planning, instructional planning, operational planning, organizational planning, personnel planning and evaluation planning (Olagboye, 2004).

The curriculum plan takes recognition of the broad objectives for which the school is established. These include all learning activities and the environment in which learning takes place. The space and the equipment required for learning are taken care by the instructional plan. Operational plan takes care of interactions that will take place between the teacher and the students. The organizational plan recognized the age structure and level of maturity of the students who are to be taught in the school. Finally, the personnel plan considers the human resources needed, while the evaluation plan incorporates the assessment of the accomplishment of educational plans. The next function of management is organizing.

Organizing as a function of school plant management involves arranging work schedules in such a way that can be carried out most effectively by people through division of labour by taken into cognizance individual specialty. Odimegwu (2003) viewed organizing in the school system as an administrative process which provides a structure whereby positions are created and functions assigned to such positions for the purpose of performing specific duties. Since the school administrator cannot carry out most of the duties in the school alone, duties are scheduled for effective accomplishment. In the management of school plant, duties are scheduled for personnel to carry out periodic maintenance, servicing of generators, repairs of furniture, and other checks and general cleaning of various sections of the school environment etc. without proper organizing, the teachers, students, and non-academic staff will not be able to corporate with their principals or even among themselves to execute school activities. Organizing in school planning enables the principal to: assign duties to people duties; minimize conflicts in schools since each person knows his area of operational influence and limitation; properly coordinate the various aspects of school activities.

Coordination is another function of management which involves the process of bringing human and material resources together to achieve set educational objectives. It is a basic administrative process for educational and other institutions. Odor (1995) described coordination as the process of fitting together various groups and operations into an integral pattern. In effect, coordinating is a process of directing and harnessing resources and group activities for achieving set educational goals without friction. Dimensions of coordination in school plant management includes: supervision, directing, and leadership. Practical aspects of these dimensions in school plant management are:

1. Supervising various sections of the school responsible for school plant maintenance,
2. Instructing or directing periodic checks, replacement of worn out roofs, repairs of broken chairs and painting of school buildings to give and esthetic outlook.
3. Ensuring that conflict does not arise from the use of school facilities such as laboratories, libraries, games pitches, and musical rooms etc.

Stimulation, also known as motivation according to Osuku (2004), is another management function which refers to the process of making people to work efficiently without force. Osuku noted that stimulation is a state of the mind which activates and directs human behavior towards achieving desired goals. In school plant management, those involved in the maintenance of the various aspects of the school environment must be duly motivated. Mgbodile (2004), identified practical aspects of stimulating or motivation in the school system to include: encouraging sense of achievement, by ensuring that staff who perform certain feats are rewarded; providing the necessary working tools, recognizing staff personnel value, and showing concern to staff welfare and involving them in decision making as well as encouraging them in praise and recommending them for training and retraining. Doing these could make staff to work cooperatively with school management to ensure that school plant is properly managed. The application of these management functions in educational institutions could enhance effective and efficient school plant management.
Concept of School Plant Management

School plant management has been considered by several scholars in different dimensions. It involves the effective utilization of school plant to ensure that its optimum benefits are felt in the teaching and learning process to achieve school objectives. Hinum (1999) opined that school plant management involves planning and keeping records of school facilities, supervising and evaluating their availability as well as encouraging teachers and students to participate in maintenance of school plant. Olga (2011) described school plant management as a series of decisions by individuals and groups in the school system in building school plant according to need, operating and using it effectively and efficiently to ensure that they are functional for use in course of implementing school programmes. Fencer (2004), stated that school plant management is the process that ensures buildings and other technical systems support the programmes of an organization. According to Adelabu (2012), school plant management is the process of planning, organizing, coordinating and budgeting for the building of school plant to ensure that service delivery is facilitated and supported in the provision of education by a school. Articulating these views, school plant management in this context is the application of management functions of planning, organizing, coordinating and controlling the physical environment of learning for the actualization of educational goals in secondary schools.

The importance of school plant management has been emphasized. Asiabaka (2008), maintains that school plant management plays a pivotal role in the actualization of educational goals and objectives by satisfying the physical and emotional needs of staff and students. The author emphasized that the physical needs of the learners are met through the provision of safe structures, adequate sanitary facilities a balanced visual and thermal environment, sufficient shelter space for work and play; while the emotional needs are met by creating a pleasant surroundings, friendly atmosphere and an inspiring environment.

The physical and emotional needs of the learners in secondary schools in Rivers State a might be compromised by the deplorable state of infrastructures. This is because a look at most secondary schools in South-South geopolitical zone in Nigeria reveals a situation of disrepair. Akinsola (2012), lamented that most secondary schools have dilapidated buildings, broken windows, and leaking roofs due to poor maintenance. The class rooms are not well ventilated, dim, hot and without ceilings and are also overcrowded. Ogundele (2005), observed that most secondary schools are surrounded by thick bushes with big trees which make them dysfunctional in use. Most buildings also exist without roofs, classrooms with inadequate destroyed and vandalized by hoodlums. The fallen roofs in some schools pose a significant threat to the lives of staff and students hence, creating a non-conducive environment for teaching and learning. Bryce (2006), noted that school compounds where facilities are defaced, esthetics destroyed, classrooms not swept and machineries rendered unproductive, leaves students unsecured, frustrated, disconforted and may encourage indiscipline and wanton destruction of properties and total disorder in the schools.

If school plant is not properly managed and utilized, it could dilapidate and wear out to the extent that the school would not derive optimum benefits from it (Adedokum: 2011). Consequently, the educational goals for which such educational facilities are acquired would not be achieved. The school administrator in addition to other duties is expected to utilize the maintain school plant effectively. This is because studies by Nwachukwu (2015) showed that a close relationship exist between the physical environment and the academic performance of students. The results of the study by Nwachukwu also revealed that the quality of education that children receive bears direct relevance to available school plant and overall atmosphere in which learning takes place. Therefore, if school plant is in a state of short supply and disrepair, teachers would not be equipped to carry out their duties effectively and consequently the quality of learning would be affected.

Various aspects of school plant management as considered by Uko (2015). These include:

i. Provision of educational facilities,

ii. Utilization of educational facilities, and

iii. School plant maintenance
Provision of School Facilities: This aspect of school plant management involves the provision of school plant in the right quantity and quality to meet the ever increasing enrolment rate in our secondary school. Execution of educational programmes demands that facilities are provided if success is to be achieved. Government, school management, parents and other stakeholders are expected to provide for their schools and be involved in every aspect of school plant management. Studies conducted in Secondary schools in South-South Nigeria showed that principals’ performance in school plant management was low (Walson, 2015). This finding was not surprising because the policies of various state governments on the provision of infrastructural facilities differ and do not fall within the purview of principals’ routine roles in the management of secondary schools. The implication of this is that government have failed to provide the needed facilities like classrooms, seats, tables, laboratories, libraries, water and electricity. The study further revealed non-availability and inadequacy of school plant to meet the competing educational needs of teachers and learners. Olagboye (2004), observed that the provision of school facilities in secondary schools is the most neglected in school management and has led to disparity in the school system. Khan and Igal (2012), asserts that the availability and adequacy of school facilities in the right quantity and quality are basic ingredients for good educational programmes and critical for achieving goals in the school system for enhancing the literacy rate of a country. The authors stated that the phenomenon where school plant remains lacking is an indication of poor educational planning for schools by the states and federal government.

Utilization of Educational Facilities: educational facilities are provided for optimal use in the attainment of set objectives in schools. When any facility is over used or stressed upon, its durability is shortened. Similarly, when they are underutilized, they will not meet the objectives they were set for and will become counterproductive. For this reason, it is advocated that school facilities should be maximally used to bring forth effective results in line with stated objectives. Adeboye (2002), noted that in managing school plants, caution should be taken in their usage in order not to underutilized or over utilize them to meet the expected objectives why they were procured. Aloga (2014), asserted that when a class is overcrowded, the desk and seats will be over stressed and will broke down easily and obviously influence effective teaching and learning in the classroom. Such classes also become stuffy and ill-ventilated. This situation goes to affect the health of the teachers and students. Stuff and smoky classes reduces the quality and quantity of air intake by students which tend to lower studying and learning symptomized by constant tiredness, yawning and feeling of dizziness or sleeping during classes (Okoys, Alao and Abosi, 2012). Similarly, when the library stock and equipment in laboratories are under stocked, they will be over stressed and their durability will be low. The authors reiterated that to ensure the durability of school plant, precaution should be taken to avoid stress on their usage.

School Plant Maintenance: school plant maintenance refers to the process of keeping school facilities in a condition close to their original state. Ajayi (2007), opined that school plant maintenance are all activities embarked upon with a view to sustaining initial use of the value of the plants. This involves regular sweeping and scrubbing of the floors, surroundings, dusting, mopping, repairs replacement and renovations. Ogoche (2011), describes school plant maintenance as the process of keeping school buildings, equipment, and other facilities in their plant generally looses value continuously as soon as they are put into use. Maintenance of working condition for use in carrying out school programmes. The situation of most public secondary schools in South-South Nigeria is worrisome as a cursory look at the schools shows gross negligence in maintenance. Uko (2015), noted that a major problem facing schools today is that facilities are not properly maintained. The physical appearance of most schools speaks volume of the poor status of infrastructure. Ogundele (2005), noted that most school buildings are in varying levels of dilapidation and disrepair. Most schools buildings are without roofs and create and unhealthy environment for teaching and learning. Several reasons are been adduced for school plant maintenance. Ogundele (2005), noted that proper maintenance of school plant helps to:
i. Keep or restore every facility or parts of school building and contents to an acceptable standard.
   ii. Keep the value of school plant in their original status and good condition for use to prevent wastages.
iii. Ensure effective correction, prevention and preservation of school plant.
iv. To create a healthy environment for productive teaching and learning.
v. Reduce the rate of disrepair or breakdown of school equipment.
vi. Improve teaching and learning resulting to higher academic performance of students.
vii. Prove the carefulness and managerial ability of school administrators, teachers and students.
viii. Provide safety and reduces accidents, stress, for the staff and students.

The maintenance of school plant is therefore important to derive the best from their usage in carrying out daily school activities. Lack of maintenance of school plant has been described as the bane of students and teachers poor performance in schools in Rivers State. Asiyai (2012) noted that negligence in maintenance of school plant has many negative effects like:
i. Constituting health hazard to student and teachers who use them.
ii. Resulting to wastage of resources.
iii. Leads to poor teaching and learning activities.
iv. Makes school environment untidy and unsafe for staff and students.

Considering the fact that the achievement of school objectives and effective performance of teachers and students is contingent upon the school environment and status of school plant, it is important that school plant be periodically maintained. Yusuf (2008), asserts that poorly maintained buildings, untidy walls, and over grown compound with grasses may suggest that the education that is given in such an environment follows the same pattern. Therefore, when new buildings are constructed and other school plant acquired, attention should be given to maintenance to enhance their durability. Ihuoma (2008), stated that an aspect of school plant management that is generally overlooked is school plant maintenance. She maintained that several secondary school buildings in Nigeria that are over fifty years old have never undergone renovation or any form of maintenance in spite of changes in the educational system. Some of the school buildings and equipment are architecturally obsolete, and lack the taste of contemporary time and they cannot contribute to functional education. Principals who lead schools that have dilapidated structures stand the risk of answering questions of poor performance in examination by their students and regular accidents as well as damages within the school (Amadike, 2002). Similarly, most caused of anti-social behavior by students could be traced to the poor state of school environment. This is because; a cosy environment can kindle the behavior of staff and students. The gap between school plant management resulting to deterioration of school plant is poor maintenance culture of ushers and various stake holders in the educational system.

Maintenance culture is the consciousness people have to timely maintain school plant before they are broken down to impede that teaching and learning process in the educational system. Amanchukwu and Nwachukwu (2015), describe maintenance culture as a continuous effort of school management to organized regular random checks from time to time of school plant so as to dictate in good time anything that might hinder effective teaching and learning. The authors stated that in the schedule of duties in schools, staff should be pointed to check all facilities and equipment and submit regular reports to authorities for adequate attention. The schedule of duties should show what is to be done, by whom, at what time and under whose supervision. In that way maintenance culture would be part and parcel of institutions of learning in Nigeria to give a facelift to school plant.

Poor maintenance culture in secondary schools may have caused the deplorable state of school plant in contemporary time in South-South Nigeria. When school plant is properly maintained, they last longer thereby saving cost for the government. A culture of routine checks, repairs of equipment and other infrastructure to avoid total breakdown is necessary in contemporary society considering the lean resources provided for educational institutions in the national and state budgets.
Roles of Government and school Administrators in School plant management

Government and school administrators have specific roles in ensuring that school plants are properly maintained.

The roles of government and school administrators have been stressed in ensuring the wellbeing of school plant in the pursuit of secondary schools objectives. Akinsola (2012) identified the following as roles of government and school administrators in school plant management.

i. **Funding**  
   Funding: The basic role of government in school plant management is to provide funds for procurement and maintenance. Considering that secondary school are no longer provided with overheads or grant as running cost, infrastructural decay becomes very common as means of funds to maintain them are not available. Government at various levels therefore needs to make adequate provision of funds in annual budgets for the provision and maintenance of school plant to enhance their durability for use in the pursuit of set objectives in schools.

Government also have a role in ensuring that funds provided for schools are accounted for to avoid misappropriation an misapplication in areas that are not necessary while school plants gets rot. This is because, adequate funding alone may not guarantee the success of school plant maintenance, rather effective management of funds is imperative to achieve desired objectives.

**Procurement:** Another role of government in school plant management is procurement of needed plant items. The low budgetary provision for the educational sector is waning on infrastructural development. The few available ones are in a state of disrepair due to unavailability of funds.

**Supervision:** Government and school administrators have specific roles in the supervision of school plant maintenance. The government through the ministry of education should constantly set up machineries to move around schools and take stock of school plant and their status in order to ensure that they are maintained regularly to avoid breakdown. Besides, were funds are provided to schools for the maintenance of school plant, there is need to supervise the appropriation of the funds to keep school plant functional to enhance teaching and learning. Accountability is therefore necessary in the application of funds in schools.

**Inspection and Record Keeping:** Other responsibilities of school administrators in school plant management is periodic inspection of available facilities, decentralization of maintenance, keeping record of school plant facilities that need to be maintained and seeking community support for school plant maintenance.

**Protection:** School administrators also have the responsibility of protecting school plant against fire outbreak, pest and hoodlums to keep them in functional conditions always. Fire extinguishers must be kept at strategic point in the school compound for use to avert any fire outbreak. Generating sets should be protected with welded panels, while classroom, libraries, laboratories, workshops and offices should be locked after school to avoid unnecessary use that could result to vandalization.

**Creating Awareness on Maintenance Culture:** Another responsibility of government and school administrators in school plant management according to Ajayi (2007) and Yusuf (2008), is creating awareness, mobilization and motivation of staff and students to imbibe and internalize maintenance culture to give life to school plant. Government through the ministry of education can organize sensitization programme in school on effective school plant maintenance.

**Routine Maintenance of School Plant:** Another responsibility of school administrators is to ensure routine maintenance of school plant to avoid total breakdown. School equipment should be regularly services according to manual guide. Repairs and overhaul should be continually carried out as well as to keep machines and equipment functional always.

**Prevention of Individual commercialization of School Plant:** School administrators should also avoid placing school plant as an individual money-making venture like renting school facilities for personal benefit.
CONCLUSION
The importance of school plant management in the teaching and learning process in Secondary Schools and other educational institutions cannot be over emphasized. The efforts of government in implementing programmes aimed at enhancing lifelong living on student in secondary schools is commendable, but effective management of school plant in the learning environment is as sin qua non. Therefore to overcome the problems of lack of maintenance culture which brings serious challenges to school plant management, government and schools administrators need to redouble their effort in budgeting for school plant management and advocating for maintenance culture in secondary schools for quality service delivery.

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