SCHOOL PLANT PLANNING: AN INDISPENSABLE COMPONENT OF EDUCATIONAL PLANNING

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Abstract

School plant planning as a critical component of educational planning, is expected to plan school facilities to be compliant with current technological trends in modern society. This paper evaluates the place of school plant in educational planning through the concepts of school plant planning, management techniques in school plant planning, selection of school site, space standards and the role of school head in plant management. The researchers adopted the ex-post facto research design. The paper identified financial constraints, political constraints, lack of school plant education, rising cost of education resources and statistical deficiency as challenges to modern school plant planning. The paper concluded that school plant is very essential to achieving positive outcomes in the teaching-learning process; because the site, size, arrangement and other aspects of the classroom, support amenities such as labs, toilets and other equipment can either be friendly or disgusting to teachers and students alike. The following recommendations were made: that government at all levels should increase budgetary allocation to education to 26%; there is need for government to involve school plant planners in the formulation and implementation of educational programmes, government at all levels to conduct adequate public enlightenment on school plant through the social, print and electronic media, among others.

Keywords: School plant, Planning, Educational Planning, Management Techniques

INTRODUCTION

The primary reason why schools are established is for the purpose of teaching and learning, based on this, the three M (Men, Material and Money) are deployed. These materials some of which are school facilities are used in order to achieve educational goals and objectives or the ideals of the society. Research has shown that learning does not only take place in a classroom, but rather, that the external environment also contribute to the development of the learner. It is in view of the need for the learners' interaction with both the internal and external environments, through discovery and exploration that led to the

development of school facilities, of which school plant is a major component.

It has been observed that many schools are now paying more attention to their school plant. School plant which includes all educational facilities has been repeatedly found to have a positive relationship with quality of education. Theses educational facilities include the site, the buildings, physical equipment, recreational spaces and textbooks used for the achievement of educational objectives (Oluchukwu, 2002). Odupurokan (2011) as cited in Udosen (2012) states that a well planned school plant will gear up expected outcomes of education, that will facilitate good social, political and economic emancipation; effective teaching and learning and academic performance of students. Therefore it can be said that the school plant is an essential aspect of educational planning because unless schools are well sited, building adequately constructed and equipment adequately provided much teaching and learning may not take place. Supporting these, Mark (2002) and Ajayi (2007) maintained that high levels of students' academic performance may not be guaranteed where instructional space such as classrooms libraries, technical workshop and laboratories are lacking.

In the words of Aloga (2014), Nigerian schools are the least ready to adapt to the onslaught of new information and best practices accumulating on daily basis due to the challenges ranging from industrial actions of academic staff at all levels of education, lack of fund for infrastructural development, corruption and a host of others. This is evident in the fact that teachers are handicapped by inadequate facilities in schools, which made it difficult for them to prepare students for greater and new challenges. According to Aloga, the school facilities themselves which provide accommodation for teachers and the learners hinder rather than enhance good teaching practices. School facilities in most Nigerian schools today are apt to reinforce rote teaching method and further hinder the students' capacity for independent and creative thinking. According to Ezeocha (1990), inadequate physical facilities can lead to undesirable personal behaviours, and large group interaction such as sports/games, drama etc. can not be conducted effectively without adequate physical space and equipment.

The term "school plant" could therefore be seen as the school site, buildings, play grounds, equipment and other material resources provided in the school for effective teaching and learning operations. Adeboyeje (1984) describes school plant "as the school site, buildings, class rooms, corridors, play-grounds, sanitary facilities, furniture and other equipment, minus the consumable materials". It is a process involving the identification of needs, programs choice of site, architectural designs, financial planning, plant construction, equipping the plant, plant insurance and plant maintenance. According to Coombs (1970) school fiscal plants include the citing, buildings, and provision of physical equipment in schools. Knezevich (1975:562) defines school plant "as the space interpretation of the school curriculum", Knezevich emphasized that the curriculum finds its space interpretation in the construction and design of school plant; which is a unique environment that facilitates the interaction between the teacher and the learner, and also provides shelter for them. Furthermore, since teaching and learning involves two parties (teachers and learners), school plant facility is an indispensable component for the implementation of school curriculum.

According to Okwori (2004), planning means a rational and intelligent process of preparing or arranging a set of decisions

for future actions directed at achieving goals and objectives by the best means (methods) possible. It is basically future and goal oriented. To plan well, one must know the needs, the goals, desires and aspirations of the people you are planning for. Carr (1986), Longe (1987) defines planning "as a process of establishing priorities for future actions in an attempt to solve economic problems that stems from the existence of scarce resources". Oyedeji (1998) defines planning "as a process of preparing a set of decision for action in future, but directed towards some goals". Coombs (1970) as cited in Okwori (2004) sees educational planning "as the application of rational systematic analysis to the process of educational development, with the aim of making education more effective and efficient in responding to the needs and goals of the students and society". Longe (1987) defines educational planning "as a process of taking decisions for future actions with the view of achieving pre-determined objective through optimum use of scarce resources". It can however be deduced from these definitions that 3 basic functions are involved in educational planning:

(a) *Pre-determination of objectives;*
(b) *Optimum use of scarce resources; and*
(c) *Decision-making*

Educational planning strives to research, develop, implement and advance policies, programs and reforms within educational institutions (Learn.org). Obanyan (2002) states that educational planning could be defined as the process of setting out in advance, strategies, policies, procedures, programmes and standards through which an educational objective can be achieved. Ogunsanwo (1981) defines educational planning "as a process of making short and long range decisions that will guide administrators in the educational sector in arriving at defined goals, in addition to

providing resources – human, financial and material". This definition is a perception of educational planning from an administrative point of view. Looking at the above definition, the following elements are contained in concept to educational planning:

(a) It is a rational decision-making process
(b) It involves effectiveness and efficiency in the use of scarce resources
(c) It aims at accomplishing pre-determined societal objectives; and
(d) It is future-oriented.

Therefore, educational planning can be defined as a rational decision-making process, which involves the efficient and effective use of scarce resources devoted to education for the purpose of accomplishing pre-determined societal objectives in the future.

Concept of School Plant Planning: School physical plant planning is a systematic way of designing educational programs, school sites, buildings, classrooms, corridors, play grounds, plant construction, insurance and maintenance to meet the needs of students and society. According to Ahmad (2013), the term 'school plant' carries a wide meaning. It includes, the school building, play-grounds, furniture, classroom, library, hostel, apparatus, and equipment, school offices, black-board or white boards, school record, etc. Its material conditions should be conducive for the all-round development of the student – physical, emotional, social, cultural, aesthetic, and moral. Good learning environment should be created by school plant. It is the most important factor in the whole educational process. Ogunsaju (1982) defines school physical plant planning "as a process of acquiring and designing a building which will satisfy the educational needs of the students". School plant planning can be defined as an integral part of educational

planning since well-sited schools, with modern infrastructure facilities has a better chance of attracting students into the school, and also promote a very conducive teaching-learning atmosphere. School plant planning is required to cater for the social and psychological well being of the users. School plant planning as a process, however borders on choosing a very suitable site, selecting the design of building and providing school physical equipment consumable and recreational space, all towards the attainment of educational goals.

Yusuf and Okwechechime (1999) sees school plant planning as referring to citing, building provision and location of physical equipment, and recreational space for the achievement of educational objectives, to them school plant planning incorporate the process of choosing appropriate site, and designing buildings and spaces for achieving educational goals. On the other hand, school plant planning according to Olutola as cited in Adesina (1981) usually implies the sitting, building and provision of physical equipment in educational institutions, he avares that school plant planning is the process in which a suitable site is selected, and a building is constructed to the satisfaction of students' need educationally; he emphasized on the need that school plant planning should tap the creative potentials of teachers, school administrators, professionals and non-professional groups, it is only when the cooperation and collective efforts of all the groups have been sort and won, that waste from lopsided planning can be avoided. Caudil as cited in Udoh and Akpa (2001) declares that the school plant planning starts and ends with the children, and that the buildings needs to be constructed in such a way that it will meet the physical and emotional needs of learners, through the provision of adequate space for work and play, clean conveniences, well ventilated with clear vision, solid safe structure and beautified walk ways However, while most administrators will view school plant planning as a comprehensive approach to educational planning which kick-starts with identification of learners' needs and terminates at ready-to-use buildings (school facilities); Architects will simply restrict school plant planning on paper drawings and terminate at the completion of architectural designs.

From the various definitions of educational planning and school plant planning given above, one can conclude that the two concepts cannot be separated. School plant planning is an integral part of educational planning; without effective school plant planning, educational programs cannot be effectively translated and implemented; thus making it an indispensable component.

Objectives of School Plant Planning:
School plant planning is important in order to achieve the following objectives:
(a) To ensure the quality of teaching and learning in the school system and equal educational opportunities to all in terms of access.
(b) It will help to reduce cost of education, ensure optimal use of school facilities and enhance educational efficiency.
(c) To rationalize the school system in a given area, and to avoid waste from lopsided planning. In planning you should not be one sided, but also take many things into consideration.

Justification for School Plant Planning
World over, researchers have done justice to the study of the justification for school plant planning by identifying the basis for it, some of which could be summarized viz:
(i) To fulfill the educational system goals.

(ii) To make out vision and draw up action plans to achieve such vision.

(iii) To ensure adequate use of resources (human, material and financial).

(iv) Educational programmes are properly interpreted and implemented;

(v) To overcome the problem of review of cost of school projects due to over or under estimate, thus save cost.

(vi) School plant facilities maintenance is guaranteed.

(vii) To ensure that learners and society for whom school facilities are provided, are enjoying its relevance.

(viii) To adapt to future changes in the society and population growth;

(ix) To prudently use scarce resources by avoiding waste and duplication.

(x) To ensure that learners are not congested in class and they have adequate ventilation.

The need to design and plan for an optimum environment is hinged on researchers finding on the importance of physical environment to learning. Some of these researchers include: Adeboyeje, Banjo, Taiwo and Adeogun. For instance, Banjo and Taiwo (1968) in their studies discovered that the major contributor to the poor performance of students in both primary and secondary schools were inadequate provision of school facilities amidst increased enrolment. Coombs (1968) also stressed the importance of physical plants in his identification of the major components of an educational system; Coombs noted that: "the acute scarcity of resources (school physical facilities) has constrained educational systems from responding more fully to new demands". Overbaugh (1990) in her bid to relate teacher professionalism and physical learning environment, revealed that physical environment affects the professional competence and performance of teachers. Some of these physical environment include: adequacy of classrooms, furniture for learners and teachers and learning tools, among others.

Principles and Processes of School Plant Planning
Before planning the school plant for primary or secondary schools, it is the duty of educational planners or administrators to identify the objectives for which the school was established, the needs of learners and the host community. As earlier stated, to plan well, one must know the needs, the goals, desires and aspirations of the people you are planning for.

Steps in School Plant Planning
To construct an effective school plant, a good educational planner must familiarize him/herself with the major steps outlined by the Council for Educational Facilities Planners, these include:

(a) Analyzing the educational needs of the community and determining the future school programs as desired as a basis for evaluating existing facilities as well as planning new or remodeled one.

(b) Surveying the facilities of the school district and establishing a master facility plan, giving due consideration to the possibility of district re-organization.

(c) Selecting and acquiring the site needed to implement the approved master plan.

(d) Providing educational specifications for each separate project or facility recommended in the approved master plan.

(e) Employing architectural and other services required to design each separate project in accordance with the approved educational specifications.

(f) Publish Tenders, Secure Bids, award contracts and put up the buildings

strictly according to the approved working drawings.

(g) Equip and insure the complete buildings and putting it into use.

A good building therefore depends on the study of educational programs, the site, district or government finances and the nature and area of building location. In a related development, Morphet, Johns & Reller (1974) have listed some of the most important steps that are involved in school plant planning and eventually development as follows:

(a) Estimating children or students population;
(b) Evaluating existing plants;
(c) Determining needs
(d) Determining financial ability.

The School Survey

In planning the school plant, the study of school survey which is the general review of the situation of the existing facilities and services in school is very important. School survey involves measuring, mapping out the position, size, boundaries of the facilities and services of a school. It is a careful appraisal of the needs and resources of the community and school concerned. A school survey should not be considered only as a fact-finding procedure, but also as an educational tool which if wisely used, will make and keep the community informed about its school plant situation. The rapid change in population growth also necessitates the need for school physical plant survey. Stoneman et al (1949) noted that in a stable or reasonably stable community, a continuing survey of the type mentioned above will indicate over a period of years the approaching needs for plant expansion, renovation or replacement. The school plant survey will enable the community to discover all pertinent information available and so errors of judgment will be held to a minimum during the school building

planning and construction. The school survey should comprise an advisory committee appointed by the community members, the board of education, the principal, the educational experts and the architect, but the final decision in all matters of school building policies should be made by the Board of education. The study of school plant needs is a continuing one, and cannot be done adequately and efficiently without the help of many individuals, nor can it be accomplished satisfactorily without an understanding surrounding community problems and state wide conditions.

Whatever techniques or methods adopted for planning the school buildings, analysis of the educational needs of the community, surveying of the school district facility, selection and acquisition of sites, provision of educational specifications, employment of architects, publication of tenders, to secure bids, and equipping the completed buildings are very important.

Management Techniques in School Plant Planning

Different Organizations adopt different planning and management technique, to suit the needs of their establishment. Management techniques are systematic procedures of investigating, planning or control which can be applied to management problems. Emerson (1970) identified about fifteen (15) such management problems in education, such problems include: staffing, finance, structure, responsibility, information, communication, human relation, coordination, consultation decision-making procedures, equipment and maintenance. Management techniques are therefore necessary in education because of lack of data, scarcity of qualified data processing facilities and personnel, and poor utilization of resources. One of the most crucial aspects of educational

planning is planning for the best way to use and manage the available resources, particularly at the system and institutional levels. The planning process is usually referred to as 'resourcing'. In resourcing, the educational planner attempts to allocate the resources (human beings, funds, facilities and programs) in such a way and by such methods that the objectives will be adequately realized. The following are some of the management techniques used:

(i) Techniques in Personnel Planning and Management: For personnel management we can use Management by Objective (MBO). According to Wikipedia (2016), this is Management known as management by results (MBR), is a process of defining objectives within an organization so that management and employees agree to the objectives and understand what they need to do in the organization in order to achieve them. The term "management by objectives" was first popularized by Peter Drucker in his 1954 book "The Practice of Management". The essence of MBO is participative goal setting, choosing course of actions and decision making. An important part of the MBO is the measurement and the comparison of the employee's actual performance with the standards set. Ideally, when employees themselves have been involved with the goal setting and choosing the course of action to be followed by them, they are more likely to fulfill their responsibilities. In the words of Business Dictionary (2016), Management by objectives aims to serve as a basis for (A) greater efficiency through systematic procedures, (B) greater employee motivation and commitment through participation in the planning process, and (C) planning for results instead of planning just for work. In management by objectives practice, specific objectives are determined jointly by managers and their subordinates,

progress toward agreed-upon objectives is periodically reviewed, end results are evaluated, and rewards are allocated on the basis of the progress. The dictionary maintained that the objectives must meet five criteria: they must be (1) arranged in order of their importance, (2) expressed quantitatively, wherever possible, (3) realistic, (4) consistent with the organization's policies, and (5) compatible with one another.

Management by Objectives (MBO) is a personnel management technique where managers and employees work together to set, record and monitor goals for a specific period of time. The core concept of MBO is planning, which means that an organization and its members are not merely reacting to events and problems but are instead being proactive. MBO requires that employees set measurable personal goals based upon the organizational goals.

Advantages of MBO: According to Shawn (2016), the advantages and disadvantages of management by objective could be summarized as follows:

1. MBO has some distinct advantages. It provides a means to identify and plan for achievement of goals. If you don't know what your goals are, you will not be able to achieve them.
2. Planning permits proactive behavior and a disciplined approach to goal achievement.
3. It also allows you to prepare for contingencies and roadblocks that may hinder the plan.
4. Goals are measurable so that they can be assessed and adjusted easily.
5. Organizations can also gain more efficiency, save resources, and increase organizational morale if goals are properly set, managed, and achieved.

Disadvantages of MBO

1. Application of MBO takes concerted effort.
2. You cannot rely upon a thoughtless, mechanical approach, and you should note that some tasks are so simple that setting goals makes little sense and becomes more of silly, annual ritual.
3. There is often a focus on mere goal setting rather than developing a plan that can be implemented.
4. The organization often fails to take into account environmental factors that hinder goal achievement, such as lack of resources or management support.
5. Organizations may also fail to monitor for changes, which may require modification of goals or even make them irrelevant.
6. Finally, there is the issue of plain human neglect - failing to follow through on the goal (Shawn, 2016).

(ii) **Financial Planning:** In financial planning, we can use Planning Programming and Budgeting System (PPBS). This is the most modern and innovate planning and management technique designed to systematize resource allocation and utilization as well as to overcome perceived deficiency in the existing system of financial management. As the secretary of Defense for the United States of America in 1961, Robert McNamara introduced some elements of systems analysis in an effort to resolve some of the problems confronting the Department; the aim was to enhance a more deliberate determination of the goals of the department. One of the concepts introduced during the period, 1961-65 was Planning, Programming and Budgeting System (PPBS); later the element of 'evaluation' was included to make if become Planning, Programming, Budgeting and Evaluation System (PPBES). The usefulness of applying this type of budgeting to the Nigerian public sector has been recognized. Ovwigho (1999:124) states that PPBES is an integrated system devised to provide school heads and their staff members better and more reliable information with which to plan the programmes of their institutions. It is also a device for making choices among the various ways of spending the limited funds to attain the goals of these institutions. It involves a set of techniques applied for the management and evaluation of programmes and the activities of an organization through identification of objectives. PPBES is therefore, a technique that calls for the formulation of alternative programmes, the identification of resource requirements and accountability for programme results. It is on this basis that it focuses the attention of educational administrators and planners on the purpose or objectives of education, the programmes to be implemented with their associated costs and the potential programme results. The PPBES emphasizes the need for accountability in the educational system. It also stresses the need for a close observation of the relationship between the input and output with a lot of importance attached to the quality of the product of the school system so as to justify the expenditure on education.

Advantages of PPBES: According to Ovwigho (1999:128), the advantages and disadvantages of PPBES could be summarized as follows:
(a) The PPBES could enable the planner and administrator to be clearer and more specific on intended objectives, assumptions and the facts related to the programmes of the institution.
(b) This is likely to enable the head of the institution to determine the most appropriate programmes properly.

(c) Through this the attention of the planner or administrator can be directed on more rewarding activities with the result that the cost of an the time for the execution of the activities might be minimized.

(d) The PPBES offers a good method for the presentation of data and estimate procedures.

(e) It is likely to reduce the range of areas of judgment and provide a better insight into the essential alternative programmes in the institution.

(f) Its systematic approach to the task of budgeting could form an adequate justification for educational budgets and this makes it easier for heads of institutions to defend their budgets and obtain enough funds for their institutions.

Disadvantages of PPBES

(a) The main problem in the application of the PPBES to the planning of education in Nigeria emanates from the fact that most school administrators lack specific knowledge of the approach, the associated techniques and the potential benefits to be derived from its application.

(b) Most of the educational institutions lack qualified analysts and adequately trained personnel who could design, implement or operate a successful PPBES.

(c) The educational programmes and policies of less developed countries are relatively unstable to establish a strong basis for projection.

(d) Apart from interference on the activities of planners and administrators by too many parties who are interested in the business of education in developing nations, financial constraints are also some of the main obstacles that could be encountered by the administrator in his effort to apply the PPBES.

(e) Difficulty in preparing educational objectives into cost-related terms.

(f) It wastes time and energy to apply PPBES because of the long processes involved (Ovwigho, 1999).

(iii) **Planning for Organizational Improvement:** The DELPHI technique is planning and management technique of collecting and utilizing specific information from several experts, as a basis for decision making and or planning. The DELPHI is essentially a technique for a systematic use of experts when one is concerned with problems of the future and there is no adequate scientific theory on the basis of which to make prediction. This method is done by drawing unstructured questionnaire to be given to a number of experts. The first responses are used to design another questionnaire and the outcomes from the second questionnaire are sued to design the final questionnaire. The outcome of the final questionnaire will be used as the summary of the study.

The DELPHI method can be used to elicit proposal for future education to asses such proposals as to their effectiveness, desirability, financial, social cost and their incidental economic or social side effects. Having obtained a set of appraised suggestions and alternative actions, the planner can then plan a stimulated conference among a group of experts. Such a conference can yield a program of action that can at the same time meet budgetary constraints and serve to implement given policy objective. A major problem in the use of this method is the recruitment and use of experts.

Advantages of DELPHI

1. It helps to select experts from all relevant fields on the topic of concern. They can include

administrators, planners, engineers, psychologists, politicians, architects, etc.

2. To identify the people you want, first by choosing one or two of the most knowledgeable in the area of concern and ask them to participate and to give names of other people they regard as important for that matter, including those who differ with their views but whose opinion aught to be heard.

3. To invite each expert specially and independently, giving him or her information as to specific areas where his/her expert opinion is required.

4. To give each expert a questionnaire instrument to fill and the responses of the various experts computed and analyzed and the results can be of use as a guide and aid to planners and decision makers.

SELECTION OF SCHOOL SITE
School site selection is an important aspect of school plant planning. Site also means "plot". Before selecting the site of a school, the following conditions must be examined:

(i) Educational needs of the community
(ii) Direction of population growth.
(iii) Long-range planning of additional sites;
(iv) Parks and recreation centres.
(v) Streets and high way
(vi) Community interest or public utilities.
(vii) Pupils' accessibility and safety;
(viii) Healthy environment free from pollution (noise, ordours, dust and health hazards);
(ix) Walking and travelling from and to school, the distance should not be more than 2km;
(x) Enough land must be acquired for future expansion at least 5 hectares for primary school and 10 hectares for secondary school;
(xi) Proprietors of the Board of Education to keep in close touch with an Architect for useful suggestions on site development and possible placement of school buildings.

In selecting site for a school, the educational planner should let pupil walking distance be a concern, site selection should be as nearer as possible to the catchment area; the factors which should be avoided in site selection include:

- *Undue moral and physical hazards*
- *Unsanitary conditions*
- *Nearness to market, rail roads, factories, rivers, heavy travelled highways, stone quarries, cliffs and forests, which are likely to have dangerous animals.*

According to Olutola in Adesina (1981), the type of school proposed for the site (primary, secondary or university), the grade level to be accommodated and the aesthetic values of the community. In addition to this criteria, you have to consider the size of the population. The policy of the government or school boards on what size the school should have and cost involved, and specific and demanding factors to be considered; these factors are:

(a) The objective of the school;
(b) Centrality and accessibility
(c) Cost;
(d) Stability of Land
(e) Social Demand
(f) School Enrolment
(g) Educational program
(h) Safety

SPACE STANDARDS
The physical size of a school is determined by the size of its students population. Calculation of site sizes would depend on the number of streams and whether the school is located in a rural or urban area.

It is expected that the land which can be made available for the establishment of a school in an urban area, may be rather less than that of a rural area. The approved site sizes according to the Federal Ministry of Education (1988) are tabulated below by urban location:

size of student population and by rural and In calculating space standards for schools, it is necessary to consider facilities like workshops, technical drawing rooms, and typing pools required on the school site.

Table 1: Site sizes for secondary schools and space standard.

SCHOOL SIZE	NO. OF STUDENTS	SPACE STANDARDS	
		Rural	**Urban**
1 stream school (240 students)	JSS – 120 SSS – 120	5 hectares	3 hectares
2 stream school (480 students)	JSS – 240 SSS – 240	7.5 hectares	4 hectares
3 stream school (720 students)	JSS – 360 SSS – 360	9.5 hectares	5 hectares
4 stream school (960 students)	JSS – 480 SSS – 480	11.5 hectares	6.5 hectares
5 stream school (1200 student)	JSS – 600 SSS – 600	13 hectares	8 hectares
6 stream school (1440 students)	JSS – 720 SSS – 720	15 hectares	9.5 hectares

Source: FME (1988).

The Role of the School Head in Plant Management: The role of the Principal in the management of school plant cannot be over-emphasized. The principal as the academic and administrative head of the school must ever be mindful of the safety conditions of the school plant, in case of accident, or injury, to students or staff, the principal must have provision for first aid care before notifying parents of such accident victims, for a necessary follow-up. Often some individuals will unknowingly place hazards for students in or on the school plant, such as broken glasses in doors, smooth floors, slippery pavements, and other dangers. The principal and his deputy must be continually alert to all such hazards through periodic inspection and observations. Again, where facilities are inadequate, the principal is capable of bringing pressure to bare on the Ministry or he could appeal to School Based Management Committee (SBMC) or PTA and other individuals that are in a position to help to provide the school with necessary aid. It is note-worthy that the actual task of the school administrator in school plant is maintenance – he/she should determine the option that is applicable in his/her own school system and make the best use of it. He/she should use wisely the resources available to him/her to maintain the buildings, furniture and equipment as far as possible in their original condition.

Constraints to School Plant Planning: In school plant planning, as in most fields of human activities, good intentions are of little value, unless they are supported by the resources (men, material, funds) to make the plan work. According to Onwurah (2003:234), school plant

planning is confronted with a lot of challenges which include the following:

(i) funds (financial constraints): It is a fact that for any educational programme to succeed, there must be adequate provision of financial resources for its implementation. However, due to high rate of inflation, school plant planning tends to be unrealistic in relation to the available resources. This has further been jeopardized by the prevailing economic downturn across the globe. The effect of this is that school plant planners have to review or shelve their programmes in order to align with present economic realities; in the process some important aspects of school plants are omitted.

(ii) Political constraints: School plant planning is based on the ideology and the policies of the government. Political instability coupled with frequent change of government, have led to inconsistency in educational policies, thereby disrupting the process of achieving educational objectives through adequate planning and implementation. Political rivalry has seen frequent change in educational policies in Nigeria over time. On the other hand, there is the tendency that some leaders consider education as an instrument that could be used to brandish political influence, so it becomes difficult to develop a realistic plan. This also results in educational projects being executed and supervised by non-educationists.

(iii) Lack of school plant education: School plant planning and maintenance is obstructed by lack of school plant education and lack of goodwill of the people. Generally, the citizens of the country consider school plant and educational programs as mainly government concern, as such, they show little or no interest in them, so the school receive less cooperation from the people,

because their capacity is not built to realize that school plant is the property of the community; as a result, there is no systematic approach to maintenance of school plant.

(iv) Rising cost of education resources: In view of the present economic realities, coupled with high rate of inflation, there is high cost of education resource, so much so that school plant planners tend to underestimate the cost of educational programmes and over estimate the projected revenue with which educational plans could be implemented. This has led to several crises in executing planned school programmes, as many of such laudable plans had to be foregone to pave way for others (opportunity cost). Also, the corrupt practices in the award of contracts for school plant without due process, have left projects uncompleted, and those completed do not have the appropriate specifications.

(v) Statistical deficiency: The process of school plant planning is also bedeviled by the problems of inaccurate statistical data. It is an established fact that for any meaningful planning to be carried out, especially on school plant, statistics is very crucial. For instance, if the planner does not know the exact number of children that are in a local government, state or country, as the case may be, and how many of them will be of school age within a given period, the forecast of enrolment will be unrealistic which will in turn affect the planning for school plant facilities. This difficulties makes school plant planning to be isolated from other aspects of educational planning.

(vi) Lack of school plant maintenance and public enlightenment: Deterioration of school plant is a natural process, but government do not build the cost of school plant maintenance into school budgets

which makes it difficult for school administrators to effectively maintain school plant. There is also the lack of proper enlightenment of the public on the need to secure, own and maintain the school plant by government.

Conclusion

School facilities otherwise referred to as school plant is of great financial cost to the school system. The importance attached to it as a vehicle for effective teaching and learning cannot be over-emphasized. School facilities are very essential to achieving positive outcomes in the teaching-learning process; because the site, size, arrangement and other aspects of the classroom, support amenities such as labs, toilets and other equipment can either be friendly or disgusting to teachers and students alike. The school plant is the mainstay and support of all teaching and learning activities. This simple fact has been noted to overwhelmingly influence the acts of teaching and learning. Thus, school plant planning cannot be ignored or overlooked in the process of educational planning – hence an indispensable component. It will therefore be disastrous for school plant planning to be left in the hands of contractors, Architects and Engineers who have no knowledge of what educational administration and planning is all about.

Recommendations
1. Government should increase budgetary allocation to education to 26% of her annual budget as recommended by UNESCO so as to make adequate fund available for the execution of programmes in education.
2. Government should ensure accurate and timely disbursement of revenue accruing from Education Tax to all levels of education to enhance educational plan implementation.
3. Stake holders should contribute their quota financially through donations, endowment, development levies, tuition, infrastructural provision, etc. so that funds and facilities could be available for school programmes.
4. Educational administrators must imbibe zero tolerance on corruption to ensure that school plant planning, as much as possible, reflect the available resources; and seek alternative sources of funding.
5. School plant planners in the Ministry of Education should establish close relationship with policy makers, so as to be carried along in the formulation and implementation of policies in education.
6. Government at all levels should conduct adequate public enlightenment on school plant and educational programmes through religious, traditional, political, and opinion leaders at the community level, town hall meetings, use the social, print and electronic media to educate the public so as to secure the interest and cooperation of the host communities and general public.
7. Government should build the cost of school plant maintenance into school budget so as to allow school administrators plan systematic maintenance on school plant.
8. Government should endeavour to ensure accurate and reliable demographic and education statistical data that could aid planning in education.
9. Government should use their economic machineries to check inflation and thus reduce the high cost of education resource. Due process should be followed in the award of contract for school plant.

319

Limitations

This study is not without certain obvious limitations. As an ex-post facto study, the validity of the findings for generalization depend much on the accuracy and authenticity of the data collected from ministries, departments and agencies, which the researcher could not guarantee. Again, there were places that proved difficult to access in Taraba State, North-east, Nigeria due to insurgency, communal and ethnic crises. Another constraints to the study was finance. Based on limited data, lack of access and poor funding, the researcher could not go into the role of the Architect, Engineers, Ministry of Education, and the Bidding process in school plant planning.

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