

UDC:373.2.091(662.6)

TOWARDS EFFECTIVE EARLY CHILDHOOD EDUCATION PLANT PLANNING

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Abstract

Effective plant planning facilitates instruction and learning processes. Its contribution towards the physical and mental well-being of the beneficiaries forms the basis of this paper. Specific structures peculiar alone to some level of education should be effectively taken care of during planning process. Therefore, issues such as determining specific building, structuring the physical environment and plan maintenance among others are discussed.

Keywords: Early childhood education, plant planning

Introduction

Raising a child is one of the most complicated and important challenges for parents, caregivers or teachers and policy makers. Its importance and complication are based on the fact that childhood development takes place at a rate that exceeds any other from conception to the initial tentative steps into a pre-nursery classroom. Research has proved that early stages of life have the potential for being a rich and rewarding foundation that will support a child all the way into adulthood. This calls for proper plant planning of the environment of early childhood education.

In the current National Policy on Education (FRN, 2004) early childhood also referred to pre-primary education is defined as the education given in an educational institution to children aged 2 to 5+ prior to their entering the primary school. It is therefore, the bedrock of the educational system.

Plant planning in an educational set up such as school, means considering various ways to put up the structured features to suit the instructional and learning processes. Each level of education has its peculiarities which the plant planning must take into cognisance, otherwise the plan is considered a failure if it does not meet those requirements. The school plant is usually seen as the site, the building, equipment, and all facilities of a school. It can further be described as the controlled environments, which in any form facilitate the instruction and learning process while at the same time protecting the physical well being of its occupants. The school plant planning in early childhood education should start and end with the children. The buildings are to be designed with a specific reference to satisfying the physical and emotional well-being of the children. In order to meet the physical needs of the children, a safe structure, adequate sanitary facilities, balanced visual environment, and an appropriate thermal and sufficient shelter space for work and play should be provided. It has been observed that children learn better when facilities are adequate than in the absence of such essential facilities. Caregivers/teachers in early childhood centres are more effective in the face of enhanced and adequate facilities. Consequently, plant planning should consider the caregivers/teachers as much as they do the children since both are complementary to each other in achieving the goals for which plants are erected.

School Plant

Describing the term school plant, Olutola (1981: p 210) states:

It includes the site, the building and equipment. It embraces permanent and semi permanent structures as well as items such as machines, laboratory equipment, other physical, sports, and recreational facilities and equipment, blackboard (chalkboard) and the cleaner tools.

Globally, school plant planning considers siting, building, and provision of physical equipment at any level of the school system. It should be noted that, similarities and differences exist at the different levels of the educational system in terms of their feature. For example, the principles guiding site location and the function of some specific plants like the

classroom, size of hall, laboratories, and libraries are different in proportion to level of school, size of school and population.

Plant Planning in Early Childhood Education

The Minimum Standard for Establishing Schools (MSES) (FRN, 2005: p 9-10) gives a break down of the facilities that form the core school plants to be provided at inception of early childhood/pre-primary schools in different environment in the country. Briefly, the environment was classified as Rural (Grade 3), Semi-Urban, Rural (Grade I) and Urban (Special Grade). These different environments definitely require different facilities to be planned for and provided at inception and as the early childhood education centres continue to exist. The dimensions of land and classroom, administrative block, basic health scheme, toilet facilities, classroom furniture, instructional materials to be provided, site plan and approved building plans. Also the certificate of occupancy and fencing, playground and equipment, and utilities as stated in The Minimum Standard for Establishing Schools, (2005) are to be strictly assured before approval of an early childhood education centre by the appropriate authority is granted.

The Planning Process

Planning is the key to establishing a quality early childhood education. To fail to plan, is to fail. Childcare providers and staff who have worked in early education overtime are probably useful during planning for some inputs based on experience on the job. Professionals (architects, designers, contractors) can incorporate their knowledge into the planning process. Effective interaction should exist between the professionals who work with children, and the professionals who design and build facilities that engender high quality facilities (Children Investment Fund, 2001). The planning process involves some identified stages. Some of which are the:

Site Selection and Acquisition

Site selection and acquisition is one of the most crucial stages of physical plant planning. It has to do with acquiring the land through purchasing, paying compensation, getting of the necessary legal documents that entitles one to the land and fencing or demarcation (Agabi, 2004). It must be stressed that nothing is more important in a building programme than the size and character of school grounds. Insufficient space interferes with development or adequate school programme.

The site of an early childhood education centre should be healthy and safe. It should be free from excessive noise, smoke dust and congested traffic. It should have adequate space for future expansion, drives, recreation, parkways, and beauty elements. Search and select a good architect to do preliminary review of the zoning, parking, environmental, accessibility, and use classification for the site. An architect should be selected based on experience in the design and construction of childcare facilities. This could be sought from demonstrated accomplishment from centres where previous designs have been carried out and of course how well they function.

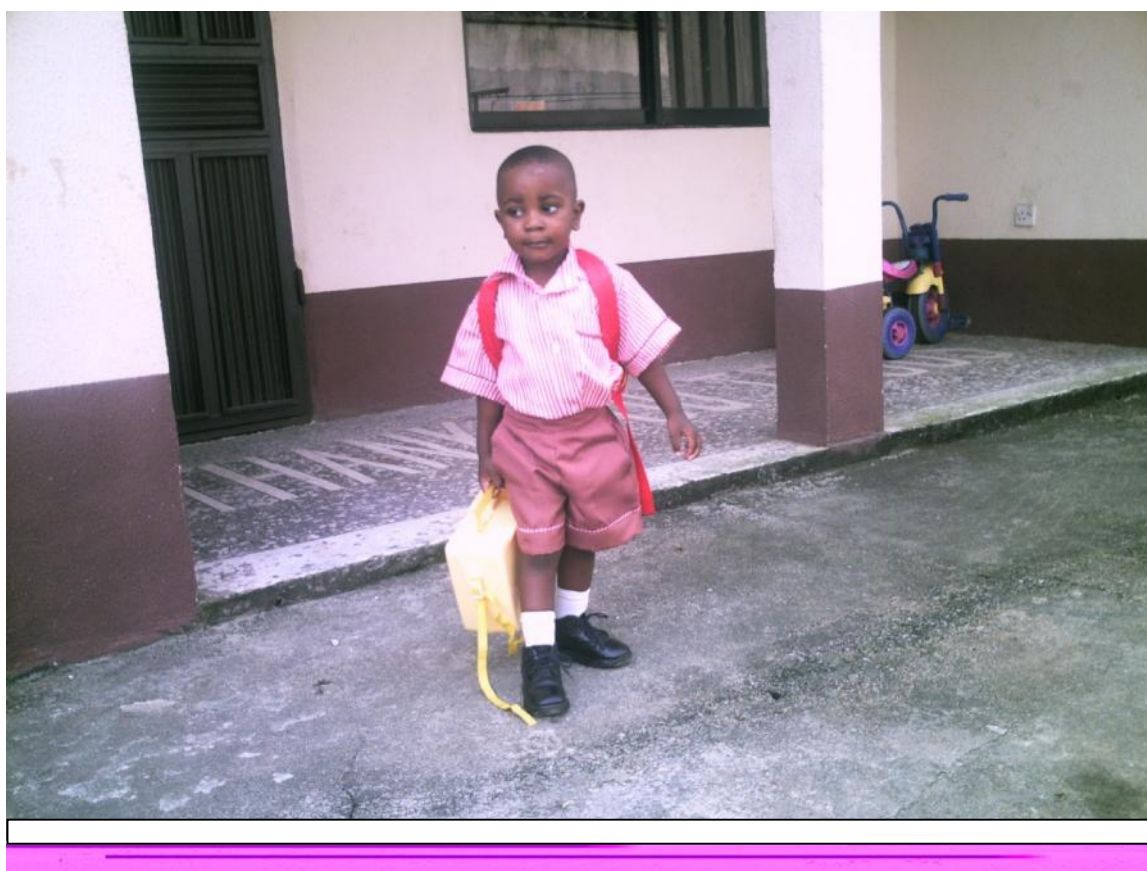


Fig. 1: *Topography* – flat surface, improved terrain & good drainage facilities

Topography

The topography of an early childhood education centre should be flat with adequate drainage facilities provided to prevent water log during rainy season. Swampy sites are also not advisable. They breed earthworms and tapeworms, mosquitoes and tsetse flies within the tropical areas. Apart from the fact that the site should afford a commanding location for

building, each part of the building should have correct orientation as to natural favour ventilation.



Fig.2: *Playground* - Free from hazards

Freedom from Danger and Health Hazards

Safety hazards should constitute a necessary consideration in choosing site for early childhood education. Early childhood education centres should not be sited close to noise generating or vibrating location that can hamper effective instruction and learning conditions. Those to be sited in urban areas should be far from and insulated from noise, and bustles from motor parks, aircrafts, market, and causal work site. An ideal early childhood education centre should be remote from industrial traffic, business distractions, and health hazards.

Quality Space

The rising demand for early childhood education points to the fact there will be future expansion of facilities in the existing ones. It is important to realize the need for a good reasonable space for a school plant from the start. Quality space support quality programming. A well-designed quality space will enhance and support the children's

developmental progress and also enhance and support caregivers in implementing quality programme.



Fig.3: *Quality Space* – standard size

Determining Specific Building and Other Needs

Buildings in an early childhood environment should be constructed to the need of the children, while taking into consideration functional features such as adequacy, efficiency, and economy. The dimension of the classrooms should be such that both teachers and pupils will have enough work and play space. Classrooms should be well ventilated; partitioning should be made easily removable for adjustment, rearrangements of portable furniture, and learning facilities and equipment.

Equipping and furnishing the building of an early childhood education should consider the fact that “its structure or pattern is flexible, its infrastructure is different from the specification of formal classroom, the environment is baby friendly and the furniture used is tender and sensitive (Uzodinma & Akinware, 2001).”

Sports facilities for all round development of the child regardless of abilities should also be planned for. There should be adequate playground free from harmful objects and with adequate play facilities. The availability of utilities such as running water to ensure centres are kept tidy and pupils attended to when nature calls by virtue of their ages. Effective means of communication for proper information disseminations to parents should be planned for. Provision for a sick bay, first aid box, fire extinguishers, evacuation rules in events of emergency or fire should all be incorporated in the planning process.

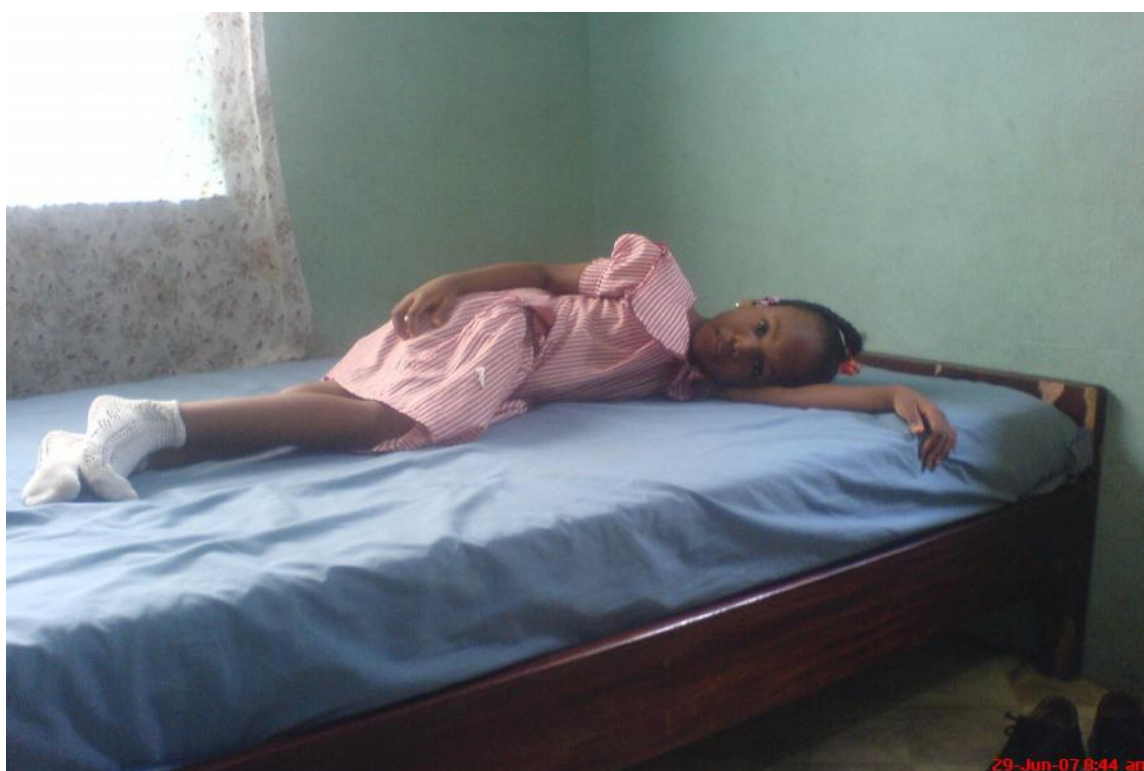


Fig. 4: *Sick-bay* – roomy, furnished & well ventilated

Structuring the Physical Environment

It is one thing to identify these core plants and another to structure the environment to facilitate harmony among the children and warm, positive relationships between the children and the caregivers.

Structuring the environment in terms of managing space and materials is done to promote the children's all round development. The environment is therefore structured to meet the needs of the children. These needs are identified as physiological, safety, social and esteem needs (Maslow in Kostelnik, Whiren, Stein & Soderman, 1998). To the children

physiological needs include a balanced diet, enough sleep, and appropriate room temperature. Safety needs include freedom from physical danger and fear; social needs include the children's need for acceptance and a sense of belongings; while esteem needs include self-respect, recognition, and status.

Structuring Space and materials

The physical environment in which children play and learn has much to do with their mental and social development. It has been stressed earlier in this chapter that the location, building, parking space and other factors such as lighting, ventilation, temperature control, safety from environmental hazards, environmental noise and dimension of space should not be taken for granted as they influence children's development.

*The classroom-*To ensure proper supervision and avoid over crowding, the maximum accepted adult-to-child ratios should be maintained. The recommended teacher-children ratio is 1:20 while that of nursery assistant is 1:10-15 (MSES, FRN, 2005: p9-10) .

The walls- The wall surface should be covered with easily washed paints, cleanable and fire-retardant. This is to enable children fingerprints left on the surfaces to be cleaned easily. Light colours with bright accents are also preferable to safe guard the young eyes.

Lighting- Children need adequate lighting to perform detail task. However, lower lighting, and brightly dispersed around the room are most conducive to children interaction when no reference is made to written materials.

Equipment and Furnishings- Equipment and furnishings should be arranged according to groups to regulate the use of materials. Generally, children play more successfully in groups of two to four. It also promotes healthy competition. The number estimated should match exactly the number of materials. This will reduce conflict and struggle between children and establish conditions for high quality learning or play.



Fig.1: *Utilisation of Instructional materials* – manipulation of building blocks

Storing Materials- Materials should be stored where they are most frequently used, or where it is first used and located in logical place. Children can go and get things themselves to complete an assignment if they know where they are located. This is most important for common items like paper, crayon, scissors, and the like. Children will find it difficult selecting materials on crowded shelves. Sometimes it is unsafe. Materials should be displayed on low open shelves accessible to the children.

Appropriate Size and Quantity of Equipment and Materials- Tables, chairs and desks or other equipment add to the comfort and decrease the fatigue of children if they are correctly sized. Seats should be tender and suitable for the age of the children. The number of materials made available during play in an early childhood education should be related to the number of children. Usually, the total number of play unit should be two-and a-half times the number of children (Whiren in Kostelnik et al, 1998).



Fig. 5: *Organised material utilisation – adequacy of materials*

4. Plant Maintenance

A good plant planning should take into consideration maintenance of building and equipment. To Olutola (1981), school plant maintenance refers to the keeping of the school site, the building, and the equipment in as near the original state of utility as possible. School plant provides one of the most attractive places in the community. In early childhood education, the availability and maintenance of these plants is the major attraction by parents and of course, they go a long way to determine fees charged (Obasi & Asodike, 2005). Apart from providing these plants, it is also more important to continue to monitor the use of these plants and ensure regular maintenance. Safety and security measure must also be built into such procedure. The life of any plant is dependent on the level of maintenance given to it.

The objectives of maintenance of school plant include; prolonging the life span of existing plant facilities and other materials, since unattended, deterioration and neglect could lead to high outlay. Maintenance will help prevent the situation. The repair of broken down facilities, such as seats and tables, fences and climbing equipments, rehabilitation and renovation of buildings are essential services that must be provided for maintenance of

facilities necessary for early childhood education functioning. No one would like to send his ward to a school where the hygiene and environment are not friendly. Kostelnik et al (1998) stress that sturdiness, durability, artisanship, and construction materials all contribute to safe products.

Abraham and Asodike (in press) rightly observed that it costs less in terms of money and time to maintain safe healthy environment than to take care of the consequences resulting from their absence. For example, it costs less to repair broken seat than to treat a fatal injury on a child resulting from the neglect of such repair, the duo stressed. Maintenance is necessary to ensure continued safety. It is also very important to examine materials provided in an early childhood education for potential safety. There should be no room for procrastination in carrying out the repair of dilapidated plant. Otherwise, the consequences could be very grave.

Jewel in Agi (2005), considers that maintenance services could be obtained from two ways namely:

Through contract: In this case, supervision and labour for the job...plant facilities maintenance is provided by appointed contract firms.

Through Direct Control: here staff personnel of the institution are involved in direct maintenance.

The job of plant planning manger in early childhood education does not end with the construction and furnishing educational building or purchase and installation of educational facilities. Much more important is to ensure the environmental safety of these centres where children spend prolonged time away from parents, making it gender friendly as much as possible.

Postscript

Adequate attention should be given to plant planning in all institutions involved in early childhood. It is suggestive that the job of the plant managers should very much consider the relative safety of these centres where our children are sent for safekeeping at this formative period of their lives. Above all the culture of maintenance must be built in the planning process especially in these centres where children are likely to put even dangerous things into their mouths and eye while at play. Infections because of poor maintenance could cost parents and centre enormously.

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