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Architect's Perspective in the Provision for a Creche in University of Uyo, Nigeria

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ABSTRACT

A crèche is defined as a nursery where babies and young children from nascent age of 1-3 years are cared for during the working day. Federal University of Science and Technology Uyo Nigeria recently are in dire need for a crèche facility to for a day care needs of the growing number of new born babies of its working staff from the administrative and academic sectors of the University. A literature research was conducted on the facility requirement for such facility vs-a-vis the needs for such provision for a capacity of fifty (50) children. In the BRIEF; there are needs for isolation space for the sick ones to hinder spread of contagious infant disease, staff/attendants space, sleeping, sanitary spaces, napkin washing, administrative, parents waiting for collection and registration, lactating space during breaks, etc. Where statistically articulated and analyzed to design a befitting crèche architecture that is environment friendly. It will also assist in mitigating and erasing, the danger of employing privates nannies who poses security dangers to our homes while away to official duties.

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INTRODUCTION

The motivation for the infant life protection Act 1893, and its subsequent revisions, was the comparatively high mortality rate of children. Revelations of neglect in private care captured public interest and aroused emotion. One of the first attempts to establish a crèche was made in Duneduru in 1879. In Queen Victoria's Jubilee year of 1887 produced a crèche to care for infants aged between six weeks and two years who mothers had to go out to earn their living. The crèche will relieve them of the worry bothering the warfare of the infants in the hands of nannies. Their children will be well taken care of during the day for a nominal sum while they are away earning their livelihood. Child care centres also helped to prepare children for school, promoting education through play and games.

Children were the future strength of the nation; therefore, it was imperative that mothers should receive practical support to help them raise strong and productive citizens.

Crèche should cater for working mothers as well as those who needed a few hours of child care to ship or perform other domestic tasks. Mothers would be able to leave their children in competent hands while she does the family washing, makes, the jam or goes shopping, or anything else she may wish to do that could be done more successfully free from the care of her little ones.

The importance of providing stimulating educational environment are key in enhancing the cognitive development of crèche. Optimal learning environment directly motivate students to enjoy the process of learning and help teachers to facilitate the learning process.

In addition, theorists are of the opinion that safe, nurturing spaces offer a wide variety of learning opportunities

in enhancing the early development of the neurological connections that spark emotional interest and provide the pathways for learning. These were the ideological concepts that guided in the development of a crèche architectural design for the University of Uyo located in Akwa-Ibom State of Nigeria.

STATEMENT OF THE PROBLEM

First crèches recorded in the late 19th century, were set-up by voluntary organization in New Zealand.

These struggled financially and were disliked by those who worried that their existence would encourage some single and working mothers to abandon their children completely to care of such centres. However, childcare ventures operated by religious orders such as Auberts Daughters of Our Lady of Compassion had more success because they fell under a wider mantle of charity and assistance to the poor. These heralded the idea for a formal childcare centres.

Before the advent of formal childcare centres, parents relied on family, friends and neighbours to care for young children which does not encourage enterprise and productivity. Wealthy families could employ nannies who care for children at home which recently had led to gross child abuse and insecurity by entrusting the care of a child and security of homes in the hands of a nanny often employed through facebook contacts.

A befitting crèche which will relieve working mothers in the University of Uyo of the worry bothering the welfare of their babies in the hands of nannies is highly recommended. Their children will be taken care of during the day for a nominal sum while they are away earning their livelihood. Child care centres also will help to prepare children for

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school, promoting education through play and games.

AIM

A nursery building where kids infants of nascent age from 1-3 years are cared for during their parents working days.

OBJECTIVES

- Investigate appropriate facility architectural needs for a crèche of fifty (50) capacity of kids.
- Determine number of building required for population of academic and non academic based on the rate of procreation.
- To develop quantity needed in the module of 50 capacity for the population of procreating parents in UNIUYO.

Academic staff = 1,451

Non-academic = 3,784

Staff Grand Total= 5,235

In percentage (%)= 52.35%

TEST of hypothesis for proportions:

Population proportion = P_1

Sample proportion = P_2

$H_0: P_1 = P_2$

$H_1: P_1 \neq P_2$

Given, $n = 20$, $P_1 = 5,235 = 52.35\%$, $P_2 = 20\% = 0.20$

I. The test hypothesis

$H_0: P_1 = P_2$

$H_1: P_1 > P_2$

II. Level of significance: $\alpha = 0.05$

III. $Z_{0.05} = 1.645$

IV. The test statistic

$$Z = \frac{(P_1 - P_2) / \sqrt{(P_0 q_0 / n)}}{\sqrt{0.20(0.80)}} = \frac{52.35 - 20}{\sqrt{0.16}} = \frac{32.35}{\sqrt{0.16}} = \frac{32.35}{0.4} = 80.875$$

V. Decision

Since the value of the test statistic (= 80.875) is not greater than the critical value (=1.645), H_0 is therefore not rejected.

VI. The percentage of the population proportion is equal to the sample proportion.

Hence a singular 50 capacity crèche would be adequate for the staff strength of University of Uyo Nigeria

STUDY AREA

Uyo is the state capital of Akwa, Ibom, an oil producing state in Nigeria. The town become the capital of the state on September 23, 1987 following the creation of Akwa Ibom State from erstwhile Cross River State. The University of Uyo Main Campus is located at Nwamba. The population of Uyo, according to the 2006 Nigeria Census is 554,906.

Uyo is a fast-growing city, as it has witnessed some infrastructural growth in the past nine years and home to many notable housing districts such as Ewet, Osongama and Shelter Afrik Housing estates. Uyo is notably neat and hospitable to foreigners and its at origins.

The city boasts of several recreational areas including

- Ibom connection, popularly known as "Ibom Plaza"
- The prestigious Le Mendingian Ibom Hotel and Golf Resort
- Ibom Tropicana Entertainment Centre
- A green Recreational Park known as "Love Garden"
- Discovery Park
- Chop-Stop Bar, Ewet Housing Estate

University of Uyo, formerly known as the University of Cross River State came on board in 1991, when the government of Nigeria established it as a federal University. It has developed and grown to a full fledged University with the staff strength as this

▪ Academic:1,451

▪ Administrative:3,784

Student population as this:

Undergraduates: 16,676

Post graduates: 2,804

Its motto is Unity, learning and service

DESIGN PROCESS

The design was originally programmed for a 20 capacity crèche, later after statistical analysis of the procreation rate of the staff numerical strength for Academic and non academic, the analysis recommended that the design of a singular 50 capacity crèche will be sufficient to cater for the entire staff strength. Hence, the original 20 capacity architectural was systematically and procedurally converted to a 50 capacity crèche.

The administrative and communal facilities were therefore place centrally and replicating the academic functional units both sides of the central facilities to achieve a single 50 capacity and by increasing the previous 20 capacity by 5 each side.

FUNCTIONAL AREAS/FACILITATES

CLASSROOM

The classroom environment should contribute to a child's concept of order and space as well as provide a rich, stimulating and safe environment where children can develop a variety of skills. To create this type of nurturing environment, the design of the classroom must reflect an appreciation of children's scale in the design of individual spaces as well as the choice of furnishings. The early educational classroom should also provide a maximum of natural lighting and few acoustical distractions. The colours and wall textures of a classroom are important and they can be used to differentiate quiet areas from active areas, identify classrooms, eating and play areas.

Acoustical control is fundamental concern in designing a crèche because children's voices are naturally high-pitched, and many activities, both noisy and quiet, take place simultaneously within the room. A carpeted floor is recommended. In messy areas of the room it is important to have floors that can be easily cleaned.

The classroom for infants (child of birth from 0 – 12 months) require a soft, print-rich environment where they can crawl and explore the room creating nesting areas and crawl spaces and provide the infants with the different environments within the larger motor area thus scaling the room down to their six.

For toddlers (child from 12 – 36) Large motor areas are required which should have a hard surface flooring with non-skid area carpets available for quieter areas. As with infants, the motor area should leave space for toddlers to explore and wander. While creating these intimate spaces keep in mind that the teacher must be able to maintain visual contact with the child. It is through visual supervision that early education instructors maintain order and ensure safety within their classroom.

SLEEPING AND NAPPING AREAS

Since infants and some young toddlers sleep were frequently during the day, separate areas for sleeping are required for these age groups. It should be located annexed to the classroom for teachers to maintain visual access but not

compromise acoustic privacy. Can be separated with a low, 750mm high defining wall. The sleeping area should be quiet and have dimmable light fixtures.

DIAPERING STATION

Should have a diaper charging station and diaper storage located in an easily accessible area. It consist of a charging table, storage area for diapers and other supplies and a hand washing sink. Consideration should be given to providing exhaust ventilation at the diaper station to remove odours.

KITCHENETTE

Where are central kitchen is not provided for the entire facility, consideration should be given to providing small kitchen areas in each of the units for the storing and preparation of snacks and meals. The size and out fitting of kitchens will depend on whether or not children bring their own food and the type of programme offered by the school.

SPECIAL FEATURES

The chief feature inside the crèche is the large well lighted, sunny play room where the babies may play in their cradles or about the floor under hygienic conditions of the best. There is a sleeping apartment for tired babies. Two large up-to-date bathroom with special facilities for bathing infants and also parties for the preparation of their food, and the usual sanitary conveniences. The rooms are lofty, well-lighted and especially well ventilated.

RECOMMENDATION

- A controlled learning environment is very important and makes the building attractive facilities more efficiently and economically used.
- The use of imagination in a planning producing compact designs minimizes exterior wall area, uses corridors and

service areas more efficiently, substantially more economical to build, operate, and maintain than other plan arrangement.

- Sustainable building design, green construction utilizes design practices and building materials to create resource-efficient buildings that are conducive to preserving natural resources. It can cost less to own and operate due to an increased focus on efficiency throughout the planning process.

CONCLUSION

An architecture is thus provided for infants and toddlers at their nascent age that will foster the emotional development through an architecture that provides a unique experience. Revealed through a pure and playful gesture based on the game as a means of learning.

Mothers would be able to leave their children in competent hands while she does the university official works and do anything else she may wish to do that could be done successfully free from the care of her little ones.

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Figure 1



Figure 2

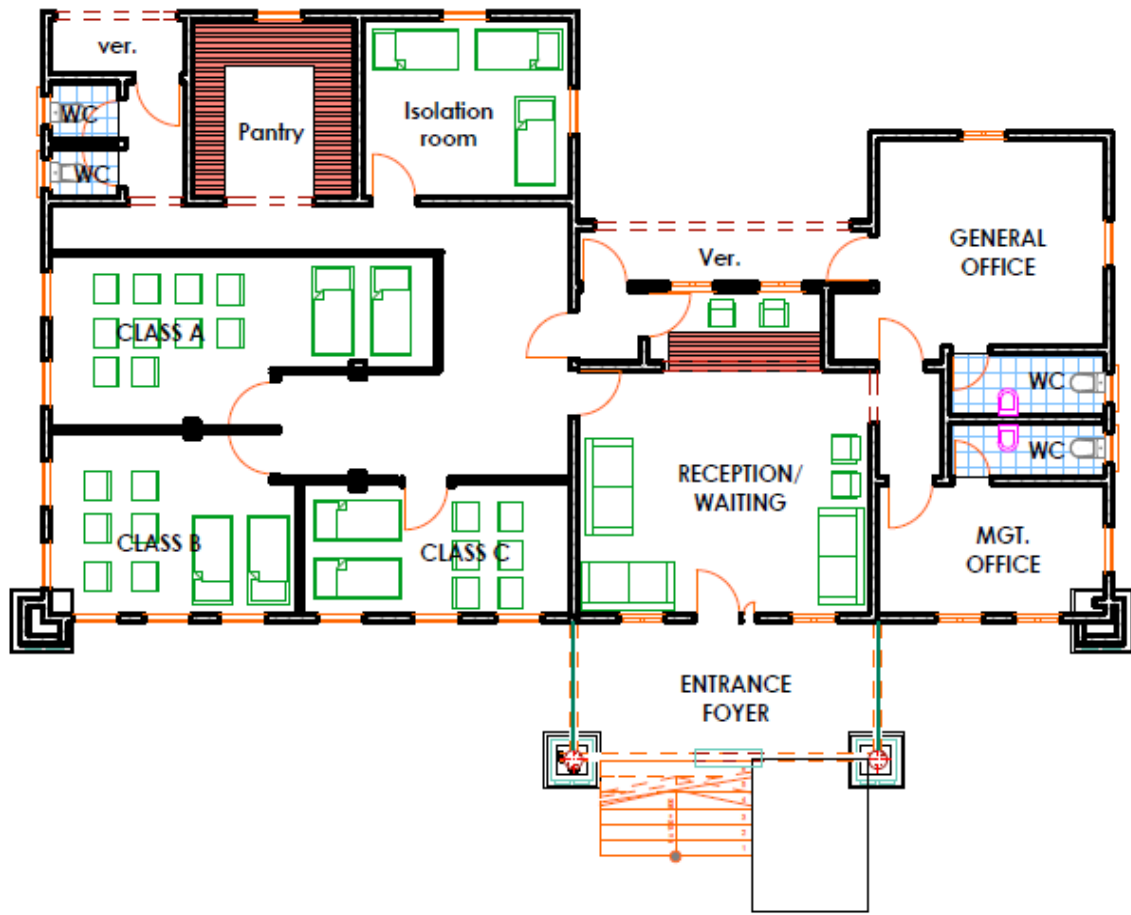


Figure 3



Figure 4



Figure 5

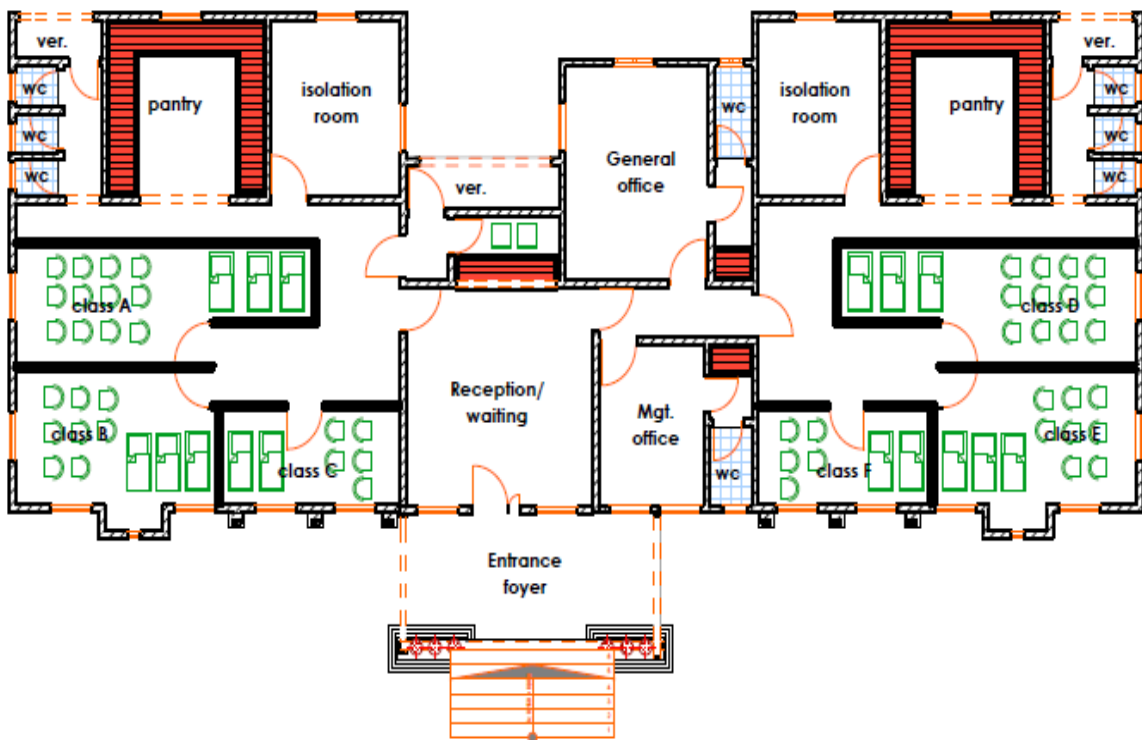


Figure 6