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SEARCH OF PATTERNS OF EARLY COLONIAL SCHOOLS: CASE STUDIES IN DHAKA

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Abstract: Education involves traditions and heritages of a society. A school presents and develops not merely the functional requirements of a society but also gives shape to the moral structure and the aesthetic doctrines of its members. In the process of westernization our society experienced a major thrust in the educational sector during the middle of the 19th century resulting in the establishment of a number of schools in Dhaka City. These schools were started in colonial buildings constructed earlier for different purposes. As time passes by the Image of these schools got attached with the Images of those buildings and has perished a deep impression in the minds of the educated class. But, now it seems that these buildings are becoming extinct to meet the present demands of the 20th century society. Improper and unsympathetic additions and alterations are destroying the environment and Images that has been developed through years. This study attempts to find out the existing conditions of the described schools in relation to the functions they perform and Forms they establish. Moreover, the growing patterns of the building blocks and facilities are studied also to develop some guidelines for future extensions and additions without hampering the long lasting Image and symbolic coding that the society has already accepted as Ideals.

Keywords: Colonial; School-pattern; Image; Heritage; Dhaka.

Introduction

In 1817 Reo. O. Leonard, a Baptist missionary opened a school in Dhaka, which was the first school started under European supervision in this district. Five years later, the number of these schools rose to 23, while in 1825 some schools were started for girls separately. Most of these schools were housed in very humble quarters with simple equipment. Many of them operated in verandahs and out-houses belonging to the richest and the most influential persons of the locality, and those having separate houses had huts with unpaved floors, bamboo walls and thatched roofs. The children used slates, while some wrote on palm leaves.¹

In this stage of our educational history some of the major schools were established and housed in the colonial *Kuthi* (Ahmed, 1986) of the affluent class of the society. These buildings were not designed or built to meet the purpose of accommodating a school but for a long period of time they have served as so. The basic form of these *Kuthi* is the same, a prototype followed by the *zaminders* and rich businessmen of that time.

Basically the school buildings served two major purposes. They are:

- a. Providing the spaces for the school functions, both inside and outside the building.
- b. Creating an image of the educational institution for the students.

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With the increase of the size and volume of the school function these buildings were subjected to many alterations and addition. New functions and increased number of students in the schools demanded several extensions in the built form. At this stage these buildings started to loose its original settings and backdrops which was an inseparable part for the basic form and image. Still these buildings are in pressure of the tight urban settings and new demands for functional spaces To determine a proper direction for the conservation of the images of these school buildings and as well as providing a solution for its future extensions is of utmost importance.

This paper focuses on the survival of these colonial buildings and evaluates the built form's efficiency to perform as a school in the present context. The study also concentrates of the flexibility or rigidity of the built form along with the site. The development, additions and alterations of the school form is carefully studied to determine the attitude and the potentialities of the site in relation to the school functions. The basic hypothesis of this study is that there is a conflict between the archetype of the original colonial building and that of the later additions and extensions. For the sake of continuity of these buildings a proposed harmony is searched between them to formulate the future extension guidelines.

Hence A literature survey was done on the educational system, architectural vocabulary and their development in the colonial period. Three of such schools of Dhaka City were taken as representatives of those colonial buildings and subject of the case study for this paper. A Questionnaire was prepared and a personal interview form of survey was done with personnel of the school authority. A physical survey was done on the site conditions and the built forms of the schools. Proper documentation was done in terms of site plan, building plans, elevations² etc.

The Context

With the introduction of New-classicism and establishment of British political domination in India around 1780, we are confronted with a new definition of building style, it is no longer to be considered as a code but rather a mode of expression. More attention is paid to the effect of style then to its inherent characteristics. The magnificent large dimensions and the sharp profile associated with heir Greco-Roman background represented the richest inheritance of the west. Architecture was deliberately used to pronounce their growing domination on the political and cultural levels in India; the classical columns become the symbol of progress.

It was considered as a "Giant leap" when the Calcutta Madrasah was erected in given Doric style.³ Once again the British conquered Bengal and the power of the conqueror is felt over the educational life. In the field of Architecture the consequence are noticeable in mixed styles. The Indian Skeleton structure was dripped into the European skin. Thus a very miss-understood process of Trans-creation started from Classicism to Racial Classicism. The Socio-political conditions gave new significance to the European Architecture, enriched the classical language with a unique dialect – the Euro- Indian Architecture.

At the end of 19th century and the beginning of 20th century 'a number of related motives' determined the course of Architecture of India. They are firstly, the rise of Bourgeois in the Bengali society; secondly, the prestige attached to the Classical Style; and thirdly, the Government policy of Westernisation of upper classes with the development of India. Finally, a new dimension opened up when architects worked for a new Imperial Style which emerged to be Gothic. This in turn was developed into the so-called 'Indo-Saracenic' or the 'Gothic- Indian style.

The Gothic-Indian approach made easier the adaptation of Indian forms, for they could be easily placed to the Gothic frame, replacing its own rich ornaments. The multi-foil arches, clustered

columns, grouped domes like the encrusted carving of decorated Gothic, free standing minarets, *shikheras* and *chhatris* all represented the Gothic counter part of Classical formula.

The new style was very swiftly adopted by some of the local rulers and the rising Bourgeoisie. It had for them a double advantage: on the surface, it was Indian style and so enabled them to acknowledge their cultural roots, but it was at the same time an Imperial style with British sanction. They found the style as a means of being simultaneously Indian and progressive.

The Mayo College at *Ajmir*, a school for Indian princes, built by the Government in 1875, was given the new Indo-saracenic or Gothic-Indian style by rejecting the Classical Greek temple plan. From then the princely India was actively introduced to that style to be appreciated and reproduced onward (Tillotson, 1989). Most of the forms and details on the building exterior and certainly the most visible are Indian. The domes, the deeply carved *Bangaldar* eaves, the balconies, the arches, the pierced screens and the mouldings are all faithfully copied from Indian Architecture. They were taken as if from the pages of Indian architectural history and replaced over the surface of an English country house.⁴

But in spite of this un-masterly mixture and modifications arising from the response to the attraction of exotic style they possesses some inspiring qualities that we cannot deny. Firstly, though the Indian forms are often wrongly applied, they are usually faithfully copied in themselves. The architect did study the finest examples of Indian design, they engaged local craftsmen to help them execute the details.

Case Studies

a. Dhaka Collegiate School

Dhaka Collegiate School, attached to Dacca College, was established in the year 1835. Originally the school was started as a 'Seminar School' on the ground floor of State Bank of Pakistan building. Later it was renamed as Dacca collegiate School and shifted to its present location⁵. The school is situated in 1. Loyal street, Sadar Ghat, Dhaka. The school runs on two shifts; they are Morning (7:30 –11: 45 AM) and Day (12:00 – 4: 30 PM) (Annon, 1998). Headmaster is the administrative head if the school who is assisted by 1 assistant headmaster in each session, while class loads are distributed to 24 teachers in morning and day shift each. Agricultural courses are conducted by part time teachers, 1 in each sift. 2-office assistant and 2 UD are to carryout the administrative duties. Total number of students of the school 1700 (morning and day equal in each shift). Class ranges from class- II to class-X and 3 sections in each class. From class-II to class-IV, number of students is 80 in each section and from class-V to class-X, the number is 75. There are 34 classrooms in total including 2 laboratories for science students. Other facility includes 1 library, 1 prayer hall, 1 hall room and 1 scout room. Total site area of the school is 32,297 sft. (2.24 Bigha). Perimeter - 820 sft. Total built area and open space is 16,672 sft. and 15,625 sft. respectively

Layout: The main colonial building is situated at the center of a almost rectilinear site, moderately curved at south-east corner. The site comprises of 3 distinct zone; administrative zone at the center, main academic zone at the north, and primary level and recreation zone at the south side of the site. Large amount of open space around the colonial building is provided, specially the play field beside the main entry facilitating to enjoy the well decorated front facade. (Fig. 1A)

Orientation: The site is approached from the east, reaches directly to the main colonial building, which is facing south. Later addition of building blocks (classrooms) are pre-dominantly north-south elongated, facing east.

Fig. 1

Circulation and space organization: The main circulation doesn't respect the axiality of the colonial building as it approaches from the east and thus divides the site into two major zones:

- i) administrative and primary level classes with the play field
- ii) main academic zone with upper classes and ancillary facilities like laboratories etc (Fig. 1B).

Lighting and ventilation: The main building contains a large multipurpose hall room at its center, surrounded by classrooms. In ground floor, rooms on both sides of the lobby remains unused, because they are not connected to the main hall room, so they cannot serve as classrooms and are too isolated to be a part of other offices. The hall room receives very little amount of lighting and ventilation due to the small size of the windows. Situation in the first floor is almost similar to ground floor- hall room still does not receive adequate lighting and ventilation. A secondary court has been evolved due to the later addition of building blocks which also distributes circulation flow to different activity zones. Circulation is linear in the added blocks by providing long corridors in front of the classrooms.

Form: The main colonial building is square in shape, two storied in height and compact in plan having a large central space. Later building blocks (rectangular in shape) added spontaneously with no relationship with the main colonial building. The main porch contains a series of giant classical columns providing a monumental image.(Fig. 1C).

Construction system: The main colonial building is of load bearing walls, 19"-24" thick, with wooden or steel beams on the roof. Average room height is more than 12 feet. 4-5 feet spanned brick arch openings forming windows. Newly added blocks are of RCC post and lintel system with RCC roofing.

b. St. Gregory's High School

The English Benedictines opened this school at Dhaka a few years before 1887. At that time its classes were limited to class eight. There were separate boarding houses for the students. Initially it was a co-education school but later the girls' section was separated to form a different school at a near by site.⁶ The school is situated in 82, Municipal Office Street, Lakshmi Bazar Dhaka-1100. The school runs on two shifts; they are- Morning: class: 1-4 (7:30 –11: 45 AM.) and Day: class: 5-10 (12:00 – 4: 30 PM.). The number of regular teacher is 16 for morning shift and 25 for day shift. 1 headmaster, 1 assistant headmaster and 5 member disciplinary committee is responsible for administrative decisions. Total office staff is 12 in number, which includes 8 workers also. The number if student is 600 in morning shift and 950 in day shift. From class-I to class-IV has 12 sections and from class-V to class-X has 18 sections. Student number in each section of all classes is 50. Classes are arranged in 17 classrooms. A multipurpose laboratory serves the students. Other facilities are 1 computer and 1 scout room. Total site area of the school is 80,505 sft. (5.59 Bigha) including the church. Built area is 24,206 sft. and rest 56,299 sft. is left open. Perimeter is 1227 feet

Layout: The main colonial building is located almost center of the northern peripheral line, adjacent to the church. The site is of complex shape but predominantly rectangular character. There are large amount of open spaces on south and east side of the main colonial building. A magnificent image of the school building is created by front facade decoration in Gothic style, attracts the passers by the road. But other facades are relatively less decorated (Fig. 2A).

Orientation: The site is approached from the north at two points; a secondary one is for the teachers directly to the main building, another is between two front building blocks, serves as the main entry. But the main approach to the colonial building (main) is from the east, which is oriented towards north.

Fig. 2.

Circulation and space organization: The main circulation artery divides the site into two major zones. First, the administrative and secondary level zone with play field and second the primary level zone with laboratory. Main building has a large multipurpose hall and the classrooms are clustered around it. The hall room has two center of distribution of circulation. Building blocks in primary level zone are linear in type and served by long corridors in front of the classrooms.

Lighting and ventilation: The spaces in the central zone of the main buildings specially the library takes in proper lighting and ventilation. The verandah in the south provides shading to the classrooms.

Form: The main colonial building is almost square in shape. Double storied, with large central space surrounded by classrooms. Later additions of building blocks are mainly rectangular forms with verandah on one side (Fig. 2B).

Construction system: Construction system of the main colonial building is load bearing brick wall with wooden or steel beam supported roof. Walls are 4-5 brick thick and room height is above 12 feet. Brick arch openings, spanned 4-5 feet.

c. Pogose School

The school was founded in the year 1848 at *ArmenianTola* (new *Armanitola*), Dhaka. by a well known Armenian *Zaminder* Mr. N. Pogose. At the beginning the school was started in Mr. Pogose's own house or *Kuthi Bari* and later shifted to its present location.⁷

The school is situated in 6, Chittya Ranjan Avenue, Dhaka-1100. The school runs on two shifts; they are: Morning: class: 1-5 (7:30 –11: 45 AM.) and Day: class: 6-10 (12:00 – 4: 30 PM.) (Annon, 1986). Up to class seven the school is running under co-education system but the girls' section will be separated in a very near future.

Teaching staff of Pogose school consist of 1 headmaster, 1 assistant headmaster (1 in charge) and 40 teachers for morning and day shift. The number of other office staff is 4. Total 2000 students are enrolled for morning and day shift. The school all level of classes (from class-I to class-X) in 32 sections.. Student number varies from 55 to 85 in each section. 32 classrooms are there for the students. Laboratory facilities include 1 physics, 1 chemistry and 1 biology lab. There are certain other facilities for the students, such as library, prayer hall, hall room, scout room etc. The school consist of 3.38 Bigha (48727 sft.) of land where total built up area is only 15,673 sft. and more than double sft. of built area is left open.

Layout: The main colonial building is sited at the center of a complex shaped site. Huge amount of open space around the main colonial building, specially on north and south side of the site. Careful site layout enables us to enjoy well-decorated front facade. (Fig. 3A)

Orientation: The site is approached from the east and reaches directly to the entry porch. The main building is oriented towards south.

Circulation and space organization: The main circulation route divides the site into administrative and academic zone. Internal circulation of the main colonial building is highly chaotic and confusing. The ground floor is abandoned for unknown reason. A service court is introduced to distribute the circulation due to the later addition of building blocks. Linear type circulation is attained by long corridors in front of the classrooms in later building blocks.

Fig. 3.

Lighting and ventilation: The central zone of the old colonial building is dark and suffer from dampness. There are overhead lighting systems in the upper floor, but they can hardly provide any ventilation to the space below.

Form: The main colonial building is squarish in shape and two storied in height. Later building blocks are elongated rectangular form with verandah in one side, facing the court having no similarity in scale, style or proportion with the main building. There is a ceremonious entry porch with classical columns providing symmetric and grand appearance (Fig. 3B).

Construction system: The main colonial building is of load bearing brick wall with wooden or steel beam under roof. Rooms are more than 12 feet in height. Brick arch openings. Later building blocks are constructed in post and lintel system.

The General pattern

Schools in the colonial buildings are mostly situated in the tight settings of old Dhaka. Since, these school buildings were originally built as '*Kuthis*' (Ahmed, 1986), they show some similar characteristics which emerges from the survey and analyses as follows.

The Archetype: Initially all these school buildings were '*Kuthis*' residences of affluent class of the society. Generally two storied in height, where ground floor served as storage, later for residential purpose, and first floor purely served as residential purpose. Grand axial entry porch leads the circulation flow directly to the central hall. This central hall was basically meeting place, surrounded by other rooms for different out-house functions (which are now being used as class rooms). There was direct linkage between the central hall with secondary hall, but visual obstruction was ensured for privacy. In-house functions were clustered around this secondary hall. Later addition of building blocks (when these '*Kuthis*' have been converted to school) didn't pay any respect to morphology, proportion and scale of the main colonial building and developed as typical office building without any physical connection to the main building. (Fig. 4A)

Site layout: The main colonial building is located at the center of the site. The sites are of complex shape and sizes. There is large amount of open spaces around the main colonial buildings. To enjoy the distinct and well decorated front façade of these main building special cares has been taken in the site layout. In this way a dramatic and magnificent bold Image of the school building are created. The side facades of the buildings especially the back is left more or less in neglected condition in respect of decoration and details.

Orientation: The sites are generally approached from east and reaches directly to the entry porch. The main buildings are in most cases oriented towards the south.

Circulation and space organization: The main circulation artery divides the site into two major zones; first, the administrative and earlier academic zone along with the play field in front and second, the later academic zone with other facilities like laboratory etc. The main buildings usually contain a large multi-purpose hall room at their centers and the classrooms are clustered around it. Secondary courts are introduced during the addition and growths of the later periods to distribute the circulation. The new circulation in the added blocks is linear in type and is served by long corridors in front of the classrooms.

Lighting and ventilation: Due to the squarish plan of the main colonial building, the central zone is generally dark. The compact arrangements reduce the possibility of cross-ventilation. Although in some cases overhead lighting is provided but they seem to be inadequate to improve the lighting and ventilation condition of the buildings.

Fig. 4.

Built form: The main colonial buildings are generally square in shape and two storied in heights. It is of compact plan with a central large space, and the later additions are distributed like wings from the building. In many a cases the later additions, which are mainly elongated rectangular forms with verandah in one side facing the courts are placed in the site without showing any respect or consideration to these main colonial buildings. Thus the magnificent and picturesque view of these buildings is interrupted and the main buildings become hidden and retarded to serve their aesthetic and well as academic purpose. In many cases there is a ceremonious porch to the main building and generally is a series of muscular classical columns to provide a symmetric and grand appearance to evoke respect and present a monumental image to the viewers.

Construction system: The main colonial buildings are of load bearing brick walls with wooden or steel beams on the roof. The walls are of 19"-24" thickness, room height is more than 12'-0" in height. The openings are of brick arches and limited to a span of 4 - 5 feet. The newly added blocks are of RCC post and lintel system with RCC roofing (Fig. 4B).

Potentialities of these school buildings

It has been observed that these schools are in a process of on going additions and alterations; there is a challenging task for the architect to facilitate this growth to proper direction keeping the original Image of the building intact. Efforts can be given not only to conserve the building, its Image and environment but also to enhance the basic intentions of bringing a coherent connection between the picturesque past and the probable future needs. Although the sites are located in a tight urban setting but due to the nature of its original prototype character it contains large spaces within its boundaries. There are possibilities to retain a proper environment for the schools by incorporating future extensions by following some basic guidelines derived from the study (Fig. 4 ,C,D).

Proposed design guidelines for extensions

Different schools may have different ways of extension based on their own constrains and potentialities, but on an average followings may be considered as general design guideline, which is of course can be flexible. Hence a detailed and elaborate documentation of the school building is to be made and a proper understanding of the architectural characters and style is to be incorporated in the future extensions. The proposed guidelines are:

1. The basic notion of extension is the extension of 'central hall space' of the colonial building.
2. This extension of central hall space can be a major axis of circulation through the main building, keeping a proportionately large space in front of it and allowing a clear and uninterrupted view, at least from the front, which will enhance image of the main colonial building.
3. Strong axuality present in the colonial building should be respected.
4. Since the rooms and the pattern of room layout of the main building is rather rigid in character the building (specially the first floor) should be used to accommodate the administrative functions.
5. The ground floor can contain the supporting services and if needed some special classes of other facilities.
6. The central Hall room of the building can be converted to a multi-purpose activity space, which will give flexibility to the design and will become the central space of the total campus.
7. Connecting courtyards should accommodate extensions or growths.
8. The architectural elements (e.g., scale, proportions, colors etc.) of the extension blocks should be designed in relation to the main building.
9. The laboratories and the other supporting facilities should be away from the main building to avoid noise and other hazards.

Conclusion

These schools are academic complexes and as well as architectural monuments. The meaning and the functions of these built forms must exist together to sustain our heritage and to create a proper environment required by the society. The elderly former students of these schools remember not only the brilliant results and education that they received here but also the vocabulary of Image, space and forms that supported them in their growing ages. That is why the former students of these schools are very much conscious about the existence and the architectural importance of these buildings. In poets verse:

*A gray temple of gothic grandeur
Standing in frozen silence
As an epitaph over the past.
Containing moments of childhood*

.....
*Images flash by – some to churn up a nameless pain
Others to flicker, then die.*⁸

As architects, we have our duties to support the sentimental requirement of these educated members of the society and, of course, to act to meet the demands of the future.

Notes

¹ The survey was conducted by the first author in M. Arch. program, BUET under the supervision of Prof. F.A.U. Khan in April 1999.

² Elevations were included in the documentation, to understand the Images created by these school buildings. These images had profound influences on the students and as well as on the education system of this region.

³ The muslims were against the British education system and they refused to take English as their institutional language but with this Architectural acceptance the British style perished a deep foundation in the minds of this community. The Image of an institution from then has become associated with the classical vocabularies.

⁴ The colonial attitude is apparent in the following statement: “The ancient philosophies are being re-exploited and their modern scribes and professors are increasing in numbers and fame....What is to come out of this strange amalgam; who can say?”

-Lord Curzon, letter to Max Muller, 1899

⁵ Bangladesh District Gazetteers, Dacca (1975), Bangladesh Government press, Dacca

⁶ Bangladesh District Gazetteers, Dacca (1975), Bangladesh Government press, Dacca

⁷ Bangladesh District Gazetteers, Dacca (1975), Bangladesh Government press, Dacca

⁸ NOSTALGIA: A poem written by Grn. Shahanul Hussain (1968), source: St. Gregory's High School, Centennial Celebration souvenir, Dec.1980.

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