Comparative Study on the British Colonial School Buildings in Old Calabar (Nigeria) and Famagusta (North Cyprus)

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ABSTRACT

British Colonial Period in various colonies in the world exerted impacts on the total life of the colonized, showing in physical layout modifications, socio-political institutional structures, economic and infrastructural development dimensions of the settlements.

Schools in British Period served as Imperial syndicate to enforce compliance through formal education, community meeting place and centers for extra-curricular activities. The school buildings stood as icon and heritage assets in their locations with measures of both tangible and intangible heritage values. They also represent the Colonial Architecture of British Empire that shows hybridization of local and modern stylistic approaches and box philosophy of design. Today their historical, architectural, environmental and educational significance should construe the evidence for registering and preserving them for future generations. This research aims to compare the school buildings of the British colonial period in Old Calabar, Nigeria and Famagusta, North Cyprus.

The methodology of the thesis is qualitative method, firstly via literature reviews of the keywords of the thesis title. Secondly, through case study that entails field survey to make selection based on the school buildings that were built during British Period in Old Calabar, Nigeria (1885-1960) and Famagusta, North Cyprus (1878-1960). The field study area will be limited to the 2 Local Government Areas in Calabar and 13 districts in Famagusta. The case study involves historic analysis and physical analysis of the selected cases that will be supported by observations, photographs and measurements to achieve the stated aims. In order to appreciate the physical characteristics of the

buildings their architectural assessment will be limited to the spatial organization, formal organization, architectural details, building materials and structural system of each case.

This thesis has five Chapters. Chapter 1 introduces the need for studying the subject and background of the study. Chapter 2 includes the theoretical framework through literature review of British Colonial Architecture and Colonial schools. The British Colonial Period in Calabar and Famagusta will be discussed in Chapter 3. The analysis of the selected school buildings and the findings on the comparison of the school buildings of the two regions will be given in Chapter 4, regarding their architectural assessments' outcome. Chapter 5 takes up the conclusion of the thesis.

The findings generated proves that linear spatial organization, load bearing structural system, repetition of spaces with similar functions, use of materials like (stones, wood, metal, glass and concrete) constitute the similarities between the schools. Differences occurs in the arcades form, roof form and slope and the wall thickness between two context's school structures. For the differences, Calabar school buildings show repetition of arcaded/straight terraces, steep roof slopes and slender stone walls while Famagusta ones show repetition of arcades with straight post and lintel character, flat/gentle roof slopes and massive stone walls due to the contrasting climatic conditions.

Keywords: British Colonial period, British Colonial architecture, school buildings, Old Calabar, Famagusta.

ÖZ

İngiliz Koloni Dönemi ının birçok koloni ülkesinin fiziksel gelişimleri, sosyo-politik ve yönetimsel alanlarda, ekonomik ve altyapı gibi alanlarda geniş etkileri olmuştur.

İngiliz dönemi okulları, İngiliz standartlarında şirketleşmeyi hedefleyen bir eğitim şeklinde hizmet vermiş ve aynı zamanda halkların toplanma yeri yanında birçok eğitim aktivitesini gerçekleştirme yerleri idiler. Okul binaları, koloni döneminin yerel ve modern mimari sentezi olarak kabul gören 'kutu' biçimindeki tasarımları nedeni ile birer ikon ve kültürel değer olarak görülebilirler. Bu okulların mimari, tarihi, çevresel ve bilimsel değerleri, onların listelenmesini ve gelecek nesillere korunarak aktarılmasını gerektirir. Bu çalışma İngiliz Koloni dönemi okullarının Old Calabar- Nijerya ve Mağusa-Kuzey Kıbrıs örneklerinin karşılatırılmalı olarak incelenmesini hedeflemektedir.

Tezde niteliksel araştırma methodu kullanılmıştır. İlk önce tezin anahtar sözcükleri ile ilgili literatür taraması yapılmıştır. İkinci olarak tezin çalışma alanı olarak seçilen Old Calabar, Nijerya (1885-1960) ve Mağusa Kuzey Kıbrıs (1878-1960)'daki İngiliz koloni dönemi okulları seçilmiştir. Çalışma alanı Nijerya'nın iki yerel yönetim bölgesi ile Mağusa'nın 13 bölgesindeki okulları kapsamaktadır. Alan çalışması tarihi ve mimari analizler yanında gözlemler, fotoğraflar ve çizimlerle desteklenmiştir. Okul yapılarının fiziksel özelliklerini saptamak için yapılan mimari değerlendirme mekansal organizasyon, formal organizasyon, mimari detaylar, bina elemanları ve stürüktürel sistem analizlerini içermektedir.

Tez beş bölümden oluşmaktadır. Birinci bölüm bu konunun çalışma nedeni, çalışmanın amacı ve metodunu tartışmaktadır. İkinci bölüm İngiliz Koloni dönemi mimarisi ve

okulları ile ilgili literature çalışmasını içermektedir. Nijerya ve Kuzen Kıbrıs'taki İngiliz Koloni dönemi üçüncü bölümde irdelenmiştir. Alan çalışması için seçlen okulların analizleri ve analizlerden elde edilen sonuçlar karşılaştırılmalı olarak dördüncü bölümde verilmektedir. Beşinci bölüm çalışmanın sonuçunu içermektedir.

Yapılan analizler sonucunda her iki çalışma alanındaki İngiliz Koloni dönemi okullarının benzer mimari özellikleri şu şekilde soptanmıştır: lineer mekansal organizasyon, yığma stürüktür systemi, aynı fonksiyona sahip mekanların yanyana sıralanması, yerel malzeme kullanımı (taş, ahşap, metal, cam ve betonarme). Farklılıklar ise binalan çatı, arkad ve duvar kalınlıklarında ortaya çıkmaktadır. Buna göre Calabardaki okul yapılarında kemerli ve düz arkadlar, eğimli çatı ve ince taş duvarlar kullanılmışken, Mağusa okullarında düz kolon kirişleri olan arkadlar, az eğimli veya düz çatılar ile kalın taş duvarlar bölgelerin farklı iklim koşullarına göre tercih edilmiçtir.

Anahtar sözcükler: İngiliz Koloni Dönemi, İngiliz Koloni Mimarisi, okul yapıları, Old Calabar, Mağusa.

DEDICATION

I dedicate this thesis to the grace woman that influenced my perception about life, Deness. Mrs. Regina Sunday Ude.

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Chapter 1

BACKGROUND OF THE STUDY

1.1 Introduction

Gomez et al. (2001:2-4), considers British Colonial Architecture in terms of style to be of European conventions of styles. Classical, Greek and Gothic as dominant with regards to India where British Colonial buildings gained enormous attention in colonies called 'Bungalow House' and 'Cottage' in the corresponding context created hybridization (Graves, 1998). British Colonial Architecture shows the following characteristics Classical lines and detailing: Doric, Tuscan and other orders; pitched roofs; timber both in floors and walls; stone works; iron sheets as roof covers and prefabricated walls and embellishments of European historic symbols. Bhabha (1990) essay emphasized colonial authority and discipline. Therefore provides the deduction that the philosophy of British colonial architecture is: "Having an abode that is like the one of England within the colonies".

The British role and impacts in colonies produce an influx in political, economic and socio-cultural dimensions. The subset of these influences typically amounting into:

- The institution of the indirect rule to gain confidence and support from territory leaders before a prominent political system.
- The improvement of the urban physical system of the colonies.

- The enhancement of infrastructural developments.
- Building types constructed includes administrative blocks, warehouses, schools, courthouses, residences, railway stations, hospitals, religious buildings, police stations, post office, military bases and cemeteries.
- Materials innovation was in the form of cement, iron, glass, corrugated iron sheets and wood panels.
- Trade principles for socioeconomic benefits.

British Colonial Architecture is a mixture of early traditional architectural methods/elements, and later styles of European origin that were transferred to different settlements under the influences of European colonization (Cummings, 1967; Polino, 1978 and Historic New England Organization). In a general sense, the character of British Colonial Architecture was of pure form/appearance, traditional wattle and daub construction techniques and materials that were regional to the colonies environments. The trend was later modified by architectural styles that focus on: Classical representations, order, symmetry, economy, and proportion as headed by Andrea Palladio (Italian Architect) and Indigo Jones (English Architect). The styles included: Georgian style, Federal style, Greek Revival style, Gothic Revival style, Queen Anne style, Shingle style and Colonial Revival style.

British Colonization period in Nigeria dates from 1885-1960. British first entrance in Nigeria was in Lagos, 1862. For administration reasons, regional restructuring was enforced to create a unified state. It will be worthy to include the memory of the invasive slave trade of the 14th century by Portuguese colonists. Nevertheless, British militarization drove this ‘set’ thereby providing them an advantageous atmosphere to

operate. Before 1960 independence, the following territories were modified and regrouped to form the colony of Nigeria in 1914 lead by Sir Fredrick Lugard (Falola, 1999; World Book, 2001 [2002]; KMLA, 2005). Lagos, Kano, and Calabar were key contact Towns for their operations (National Commission for Museum and Monuments, 1986).

North Cyprus and South Cyprus were under British rule from the period 1878-1960 but was made a Crown Colony in 1925 but got independence in 1960 (BBC, 2014). The British period in Cyprus brought about improvement in education, agriculture, port trading, reduction of corruption and architecture (Dodd, 1993).

School buildings in the Colonial Period, in the context of this study (Old Calabar and Famagusta) agree to the fact that Colonial schools encouraged gender education. The outcome that gave rise to separate schools for boys and girls, the schools were established and control by personnel with religious affiliations obeying the reasons why some schools referred to as missions' schools. In Calabar, the school building's design follows late colonial school layout that is freestyle but with architectural characteristics of the British Architecture. While in Famagusta, the schools in this period show both early/new primitive characters. The first regimented (neoclassical style) and the new colonial influences display associative/freestyle.

During British Colonial Era, school buildings functioned as structures for manpower training, the venue for crucial community meetings and cultural display. The interest of this thesis is to compare the British Colonial school buildings of Old Calabar and Famagusta in that epoch because of their heritage values. The pertinence tailored towards the invading tendency of 'ruins' which can cause a disappearance of these

unique memories if not preserved for the respect of these regions' history and future generations benefits.

1.2 Problem Statement

The focus on school buildings of British Colonial Period is timely because certain values as historical, economic, educational, architectural and environmental and intangible values are inherent in them. To this point, the communities are not aware of this heritage significance of the School buildings. Another indicator show that the school buildings are not registered with the Planning Authorities of both settings considered as regard other buildings in the similar context. Importantly, public structures and previously conducted scholarly works had not singularized this facet of British Colonial Architecture. Furthermore, the 'portico' design style adopted as an historic precedent to cater for social interaction between pupils outside the classroom tension becomes a vital architectural design concept to be conserved for future reference and adoption in similar social infrastructural development.

Before the 1960 independence, school buildings attracted the gravity of essence with the British Colonial administration. They were centers for convergence for community social functions. Another additional point is that top communal decisions, end of year cultural displays and competitions were organized in the school premises with the buildings providing accommodation for both officials and spectators. At the present, some settlements are not ready to detach this sense of space from school buildings despite the introduction of cultural centers and community playgrounds.

The British colonial period in Old Calabar, Nigeria, and Famagusta, North Cyprus has similar dating; as regards year of independence, 1960. British significance was enormous

in governance, trading and education. Buildings constructed in the two regions (Calabar and Famagusta) studied are: schools, storage houses, consulate houses and others (Williams 2003; Cyprus Today 2013).

1.3 Aims and Objectives

This research is designed to compare the British Colonial School Buildings in Old Calabar and Famagusta through analyzing the architectural assessment (spatial organization, formal organization, architectural elements and functional assessment, building materials and structural system) to ascertain their similarities and differences.

Based on this aim, this study is designed to answer the main research question:

- What are the similarities and differences of British colonial school buildings in Calabar and Famagusta?

The sub-research questions will include:

- What is British colonial architecture?
- What are the general characteristics of British Colonial Architecture?
- What are impacts of British Colonial Period in Calabar and Famagusta?

1.4 Research Methodology

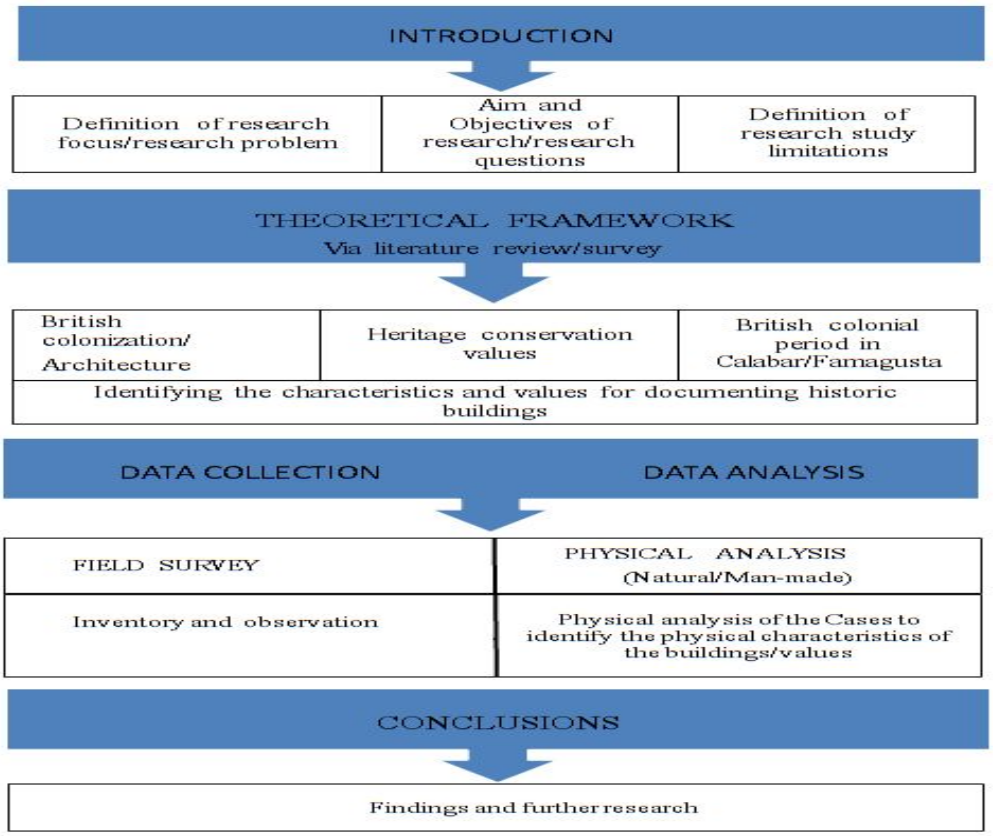
This research employs empirical research based on a literature survey, documents, and case study and elite interviews, involving three (3) steps (Table 1):

1. Theoretical framework through literature review
2. Case study applications, including data collecting, analysis of selected cases from the areas of field survey. Data collection will be via measurement and observation complemented with photographs. The analysis will involve architectural assessment in terms of (spatial organization, formal organization,

architectural elements and functional assessment), building materials and structural system used for the walls, floors and roofs of the buildings.

3. Research findings and suggestions

Table1: Research Methodology



1.5 Limitations of the Study

The focus of this thesis is on school buildings built during British Colonial Period in Old Calabar and Famagusta, which strong influence was global around 1800s. In Calabar the study area will comprise a field survey with a record of schools and locations to identify and observe from their physical character the case which changes made through interventions does not radically loose grip of the original status. In Famagusta, the field study is conducted with a map obtained from the Planning Unit of Municipal Council

that has names and location of schools on it but the year of establish, the character and information from Heads of schools formed the basis for selection.

Geographical locations within the two Towns from literature and records already pointed major catchment areas were British key buildings were zoned and played an important role in saving time and giving direction for the identification process in both Old Calabar in Cross River State, Nigeria and Famagusta in the Turkish Republic of Northern Cyprus. Taking of measured drawings of the cases is another limitation that is not conventional but definite in each case.

Chapter 2

BRITISH COLONIAL ARCHITECTURE

2.1 Introduction

In this Chapter, the history of British colonization will be explained. The general characteristics of British Colonial Architecture, British colonial architecture in: domestic, governmental/administrative, Transportation buildings, and the general characteristics of Colonial school buildings will be discussed in this section. Finally, the values of historic buildings will be elaborated.

2.2 History of British Colonization

Early British settlement started in late 16th century but with intense manifestation in the 17th century and with an estimated coverage of 13 colonies in the world Lange et al. (2006) . The new approach was in the 18th century with a double size of the early period (Fieldhouse, 1960).

British colonization system consisted of Dominions, Crown Colonies, Protectorates, Mandated Territories and Indian Empire, which were administered by the United Kingdom (Table 2). While Figure 1 shows the map of colonies that were under British Colonial control (all sections marked in red color on the map represent the colonies). The British colonial system initially started in France and was terminated in 1558; seconded in North America and was ended in 1776 as the United States of America. The final move was global which constituted the Commonwealth of Nations after 1949 (Alcock, 2014).

Table 2: Divisions of British Colonial system organized by the author from information provided by 'James Alcock' in "Historical Atlas of the British" (February 20, 2015).

No.	Type of System	Provinces	Governance
1	Dominions	Northern Ireland	Sends representative to Imperial Parliament London.
		Canada	Self-governed. The King represented by Governor and Parliament with two houses.
		Australia	
		New Zealand	
		South Africa	
		New Foundland	
2	Indian Empire	India(with 15 provinces)	British Raj. King of Great Britain was Emperor, with Secretary of State and Advisory Council.
3	Crown Colonies	Gibraltar	Self-governance due to existing leadership structure. Control by Naval Post with a Governor.
		St. Helen	
		Ceylon	
		Straits	
		West Indies	
		Malta	
		Cyprus	
4	Protectorates	Somaliland	Ruled by own chiefs under the supervision of a Governor and Warrant Officers.
		Nyasaland in Africa (**Nigeria** is included here)	
5	Mandated Territories	Tanganyika	Governed as Crown colonies after WW1.

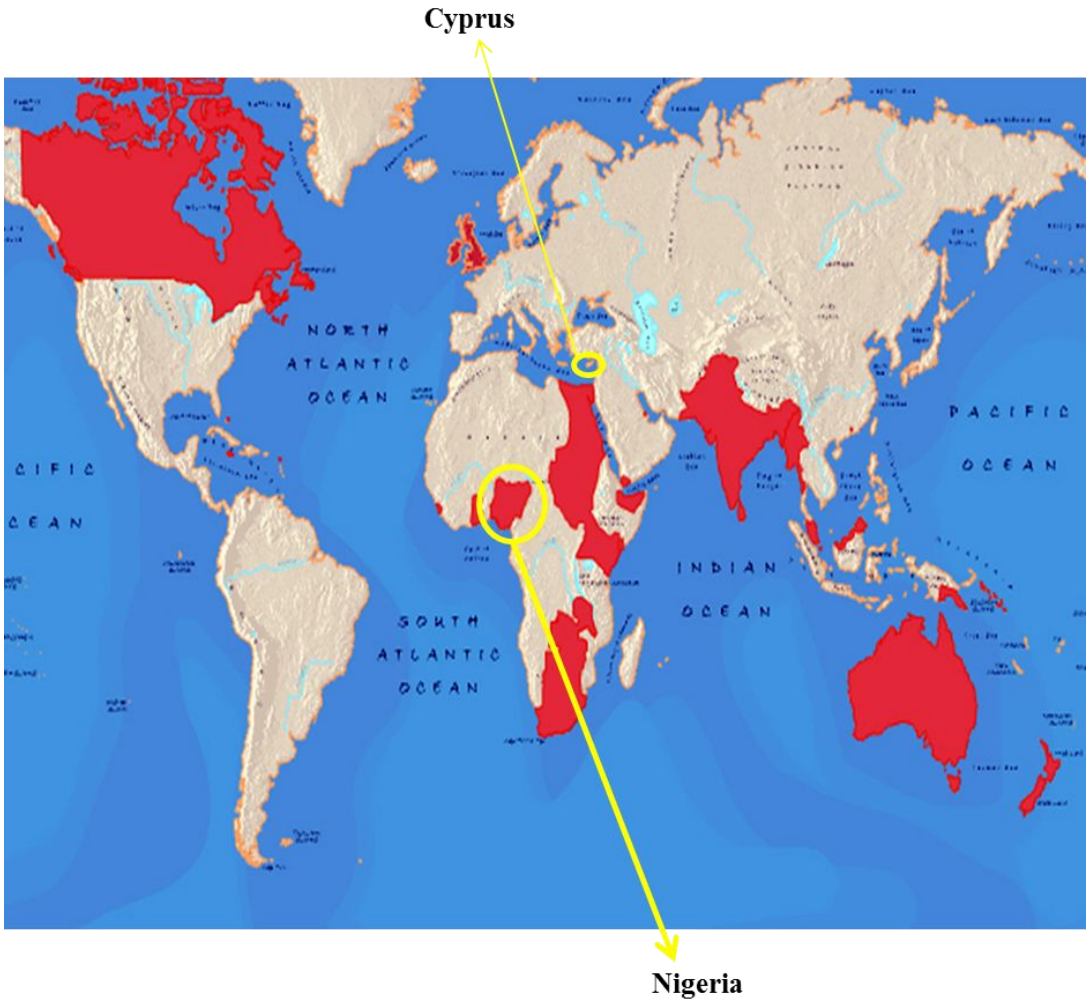


Figure 1: British Empire Map (colonies marked by red color), URL, 1

The British Colonial Period was not only a trans-cultural development as thought by some historians, but it also anchored on political movements around the world. It is critical to say that: All regions and periods of the colonial syndrome did not experience the same impact of colonialism. British settlement became a tool for the third world social development while extracting economic gains from the territories. The process is likened to "trade by barter" but in an indirect form. Eventually, colonies were influenced by the various dimensions of development. Economic development in the form of markets and commerce, political development through constituting ruling systems, and social development instituted through the hybridization of local identities with foreign (Zilter, et al.2003). The establishment of institutions, physical developments enlarged in

urban systems and infrastructures. Nevertheless, this is not void of social ills as earlier mentioned in the definitions of colonialism.

2.3 General Characteristics of British Colonial Architecture

British Colonial architecture shows differences regarding climatic, geographical character of regions. The countries considered are Malaysia/China, South Africa/Zimbabwe and Canada, (Table 3).

Table 3: British Colonial Architecture characteristics at countries level, developed from (Heritage Malaysia Trust 1990; Gullick 2000; Chun, et al. 2005) for Asia, (Demissie 1997; Hungwe 2013) for Africa and (Blumenson 1978; Harmon 1983) for Europe.

Malaysia/China	SouthAfrica/ Zimbabwe	Canada
 	 	 
Warm and humid.	Warm and humid.	Cold/warm and moist.
Wood, bricks, Chinese clay tiles	Stones, mud bricks, wood, thatched iron corrugated sheets and slates.	Stones, bricks, clapboards, roofing tiles
1) The introduction of row housing in housing development. 2) Buildings height usually one or two storey. 3) Use of gable roofs/ lower secondary roofs. 4) Single entrance door with a side window. 5)Terraces around the building with wooden, iron or Doric/Corinthian order columns. 6) Windows finished with	1) Large veranda to shade summer sun. 2) Use shading devices/breathing walls. 3) Hip/gable roofs with dormers, and parapets edging gables. 4) Rusticated pedestal. 5) Ornamented windows with cill projections around it. 6) Classical columns: Doric and Corinthian order.	1) The fireplace and chimneys are crucial. 2) Pediment porticos with massive Ionic columns and pilasters in facades facing streets. 3) Symmetry, balance, refined and use of rectangle, square, and octagonal forms. 4) Casement windows with bar and having shutters as secondary cover materials. 5) Front door design with lunet with side fixed light.

Venetian, louvers, and wooden shutter. 7) Balustrades in iron or decorative molding. 8) Use of rectangular or square forms. 9) Principles of symmetry implemented. 10) East-West orientation which allows longer part of building facing North and South. 11) Chimneys not widely used.	7) Single/two storey. 8) Symmetry and vertical rhythm in window placement. 9) The central position of gable defining the entrance door. 10) Chimneys used in Some types. 11) The form is either H or T-shape.	6) Gables with large decorative cornice define the entrance.
Linear and centralized spatial organization of spaces surrounding the Hall or a Courtyard. The space link from public space to semi-public to private is implemented.	Simple linear spatial organization. Attention is given to public, semi-public and private spaces connections.	Linear spatial organization. The place of public/ semi-public spaces is intervolved.
Synthesis of Moghul and British styles: Dutch, Baroque, Palladian, Neoclassical).	Cape Dutch, Victorian, and Neoclassical.	Palladian, Georgian and Neoclassical

From (Table 3), British Colonists' sensitivity to climate was demonstrated in the selection of the site. Closeness to water sources and hill top for the balance of summer seasons and wider view of the landscape for outdoor living. In the tropical zones, the design indicates the use of broad terraces/large overhangs round the buildings to shade the interior spaces from the sun (Okwumabua, 2006). Breathing walls used for thermal comfort. While in hot/cold climates, the use of terraces was not elaborate although entrance porches implemented. Window shutters were incorporated to handle the exclusion of cold during winter. The use of fireplace was a central focus of the floor organization (Firestone, 2010).

In different contexts, material selection shows differences due to the availability of them in an area. The use of local materials like wood, bricks (for ceiling/walls) and Chinese tiles/thatched for roof cover, with the exportation of modern materials like louvers for window finish and iron for verandas stanchions created a composite of elements (Desai, et al. 2011). In Africa, the local materials used included; Mud bricks, stones, wood for walls/ceilings and roof trusses, thatched were for the roof cover. Slates/corrugated iron sheets and iron served from exported materials to the region by British. Iron sheets also used for walls in prefabricated colonial buildings (Lugard, 2013:141-145). Although, local materials like stones, bricks were used in Europe, the introduction of cement giving birth to concrete (Dick, et al. 1980).

Construction techniques in the three areas were mainly simple methods (post and lintel). However, British colonial architecture in colonies also introduced prefabrication construction techniques that they started in Europe and was transported to Asia and Africa. In Asia, the adoption of Asian people's multicultural status (Indian, Chinese and Malay) were combined (Mughal and European styles (Dutch, Baroque, Palladian and Neoclassical) (Ahmad, 1997). All for the construction of domination by European methods. While in Africa, the local methods of 'Wattle and Daub' that were abundantly in place were replaced entirely by European approaches and styles (Dutch, Victorian and Neoclassical) (Picton-Seymour, 1977). The styles which dominated Europe during the British colonial period were Palladian, Georgian and Neoclassical) (Crain, 1994).

Colonial architecture essays written so far had already explained it as a transplant of architecture from the motherland to colonies. It is expedient to mention Portuguese Colonial architecture in Brazil (Figure 2), Dutch Colonial architecture in New York and

the English Georgian architecture of the 18th century in North American colonies (Harris, 1983: 178, 243, 249,).

Figure 2: Governor's Palace of Ouro Preto, Brazil. Photo by Valter Campanato, 2006.

According to Hallinan (2006), the characteristics of colonial architecture are propagated by British in their quest for nationalism in the world, therefore, became a tool of command for imperial acceleration. It is a compendium of Georgian style, Dutch style, Palladian style, and neoclassical style (Figure 3). The influences were of England decent both in styles and lifestyles. This type of architecture went viral in the period 1600-1900 in all colonies that were under the control of British colonizers.

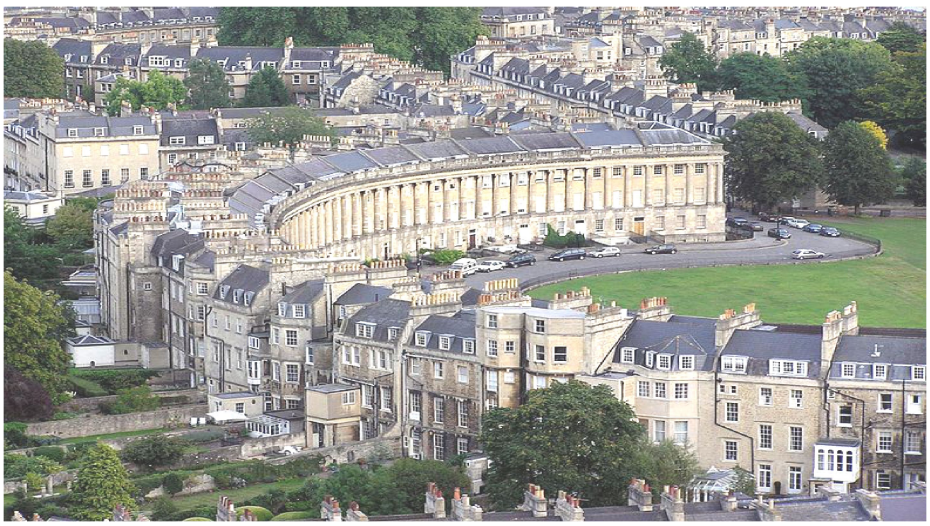


Figure 3: Georgian style at Royal Crescent, Bath. Images of England Listed Building Number 1394736 by Arpingstone (2005).

The overall characteristics of British Colonial Architecture displayed in the construction of domestic and administrative developments are defined by spatial organization, design approaches, materials, and construction techniques. The space organization in British colonial architecture lay emphasizes on use, a factor of space either at the individual or collective space (Perring, 2002; Ballantyne, 2005:264). However, it is valuable to affirm that entrance porches at different array was identifiable primarily defining the foyer to the areas. In domestication, the porch functioning as a public space flows into the semi-public spaces while the bedrooms are arranged as private spaces on the upper floor (Cheek, 2006). British spatial organization in civic buildings was persistent in the inclusion of porch with the symmetrical arrangement of classical columns and flows into a shared space that distribute users to sub-spaces in the structure.

The British colonial architecture was largely of European classical architecture and a synthesis of French Enlightenment period enormously in public buildings in Georgian style provided the base for neoclassical style (Watkin, 2005:369). The 1800 London industrial expedition in art, architecture, engineering, dressing and literature created a

global paradigm shift in the design of buildings (Tinniswood, 2011). These tendencies of European merchants, Ship owners, and Plantation owners in the affluent of wealth supported the spread of Georgian style to colonies that were under British rule. The dispensation shaped by polities, socioeconomic, cultural and technological antagonism and experimentation that favored the introduction of modernism. This intellectual transition gave birth to buildings surrounded by colonnaded porticoes (front of building in some cases), the introduction of the rotunda with top stone domes. Public buildings like museums, libraries, legislative halls, schools, railway stations and others in a similar context realized (Bergdoll, 2000:1-5).

British Architecture also brought the incorporation of semi-public picturesque especially on facades facing human appreciation to interiority living, interiors vocabulary furnishings and painting demonstrated in walls, ceilings and floors (Grace, 2011). Buildings set on rusticated pedestal that provided room for basement functions. The use arches, architraves and columns of varying orders and selective classical pediments (Norberg-Schulz, 1975). At this point, British colonists were regarded as English settlers and positioned at the apex of colonial exploration due to their prevalence in language, architecture and sociocultural tactics.

2.3.1 British Colonial Domestic Architecture

British colonial domestic architecture echoes the philosophy of “fitness for the purpose”. The practice of segregation highly displayed in the residential dwelling design and layout for “lower class” and the “stately” (Media Centre, 2014). Architectural domesticity depicted a show of wealth, the elite seeks to build their houses on a hilltop (Nangia, 2004). This distinctiveness spread to various colonies by the settlers. Nevertheless, the author selects to concentrate on the ‘Bungalow House’ which exerted significant influences in that era. Considerably on the residential housing types of

America and other colonies controlled by the British (Winter, et al. 1996). Figure 4 is a clear image of the social discrepancy in domestic architecture which existed in that era for comparison, in the same context like India.

Thengal Manor built 1929 in Jorhat. Photo from Heritage North East India

Ta Khan Home Photo by Alan Morgan 12.11.2012

Figure 4: Social status display in British colonial domestic architecture in India, (URL, 2 & URL, 3)

The Bungalow house from historical reports emanates from India. The region of Bengal developed it as a single-family housing known as 'bangala'. It was a vernacular architectural arrangement that was suitable for summer living: one-storey and mostly roofed with thatched. The style copied by British colonist's couple with their military skills modified it compactly to accommodate spatial functions like Kitchen, living room centrally placed, dining, bedrooms, and bathroom. The colonies with larger settler's influx experienced an increment in floor height to two-storey. The first bungalow house in America was designed by 'William Gibbons', 1879 in Massachusetts. The character of this British colonial domestic architecture gets rooted with Arts and Crafts features.

Meanwhile, the first colonial domestic building constructed to cater for the shelter needs of settlers was made from available local materials and known as Cellars. The structure was for temporality due to its vulnerability to decay (Figure 5).

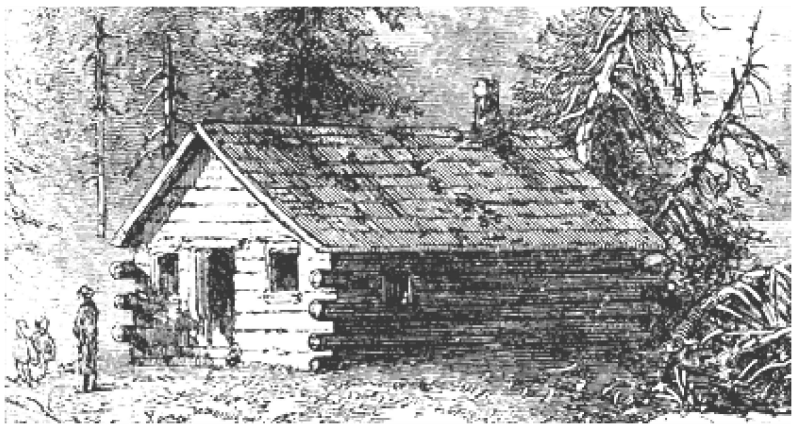


Figure 5: Early settlers building (cellar) by (Lossing, 1912)

The next shelter was the transportation of Manor House and Cottage, and this type was further improved to Saltbox, Cape Cod cottage and replaced by English Cottage buildings (Keister, 2007). While in the enlightenment age, another pattern called Georgian Mansions were introduced (Figure 6).

Manor , photo by Mike Searle (2009)

Cape Cod by Brian Toolan (2013)

Cottage , sourced from Holme, (1906)

English Cottage by Gellner and Keister (2007)

Saltbox, photo by Daderot (2005)

Georgian Mansions from Archived of National Register of Historic place 2011

Figure 6: Photos of British Colonial domestic architecture

The spatial organization of these British colonial houses was: a one-room, fireplace at one corner with a sleeping Pent created in the attic of the steep roof. In later times, this arrangement was improved by having an additional parlor, dining room, kitchen, and bedroom (Holme, 1906; Dick, et al. 1909). The characteristics of British domestic architecture summarized thus:

- The half-house contained a kitchen functioning for both cooking and dining, and the living room meant for ceremonies.

- The three-quarter house had an enlarged kitchen and a small room.
- Full Cod possessed a symmetrical facade having two windows on both sides of a central entrance door.
- Porch with square or circular columns, Wood, stone and stucco siding in walls.
- Compact floor organization with no or few lobbies.
- Shallow pitched roof with large overhangs and triangular brackets and exposed rafters.
- Chimney attached to the rear elevation.
- Spacious windows finished with lead or stain glass.
- Ceiling follows the lines of rafters mostly with wooden paneling.
- Wardrobes and shelves are inbuilt.

(Architectural Forum, 1933; Gebhard, 1985; Wilson, 2004).

Sample floor plan of a bungalow is shown in Figure 12, followed by photos of various approaches from the USA, Asia and Africa showing the facades expression of each region (Figure 7).

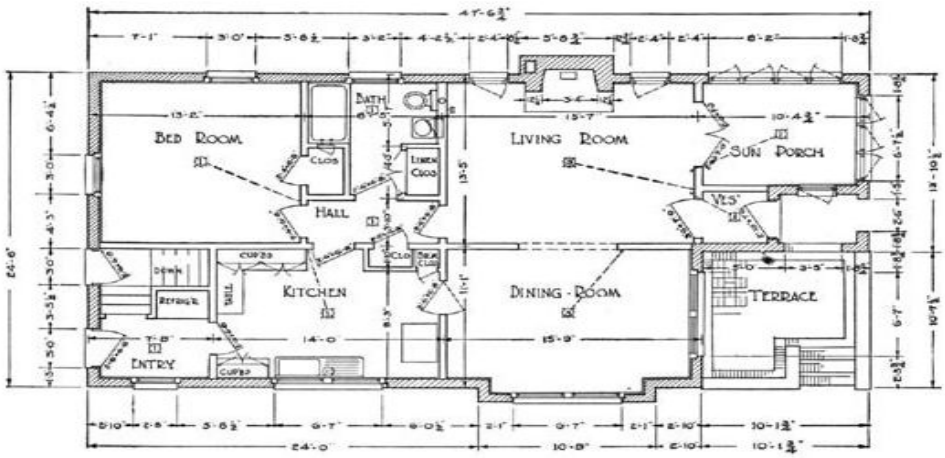
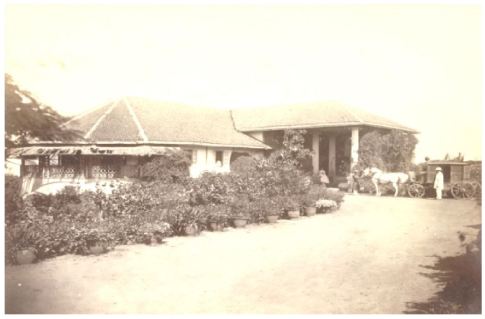


Figure 7: Sample Bungalow Floor Plan, URL, 4

Chicago Bungalow by Silverstone 1, URL 11

California Bungalow built 1919. Photo by Rochelle Kramer posted 18.07.2014



English Bungalow in India, URL, 5

Bungalow House in Swellendam 1, South Africa, "(URL, 6)"

Figure 8: Bungalow houses during British colonial period

2.3.2 British Colonial Governmental/Administrative Architecture

British architecture anchors on the principles of simplicity and functionality (Wood, 2015). The civic architecture of Britain also flourishes in the administrative buildings of British colonies like India, Bangladesh, Pakistan and others in Africa and the Middle East. British colonial administrative structures were implemented in three dominant architectural styles: Palladian, Georgian, and neoclassical. Palladian style was evolved by an Italian architect, Andrea Palladio but was patronage and taken to England by Indigo Jones and from 16th toward 18th, the style are exported to British colonies (Reed, et al. 1980). This technique operates on the principles of: 'Palladio, symmetry, proportion and Arcadia'. It features show as 'motifs' of Palladian, porches/portico's with Corinthian order columns, arches incorporated in window design with flat lintel on both sides of the window. Centrally positioned dome over the rotunda with fixed light

windows to light the interior space. Dublin City Hall (formerly Parliament Building) is an example (Figure 9).

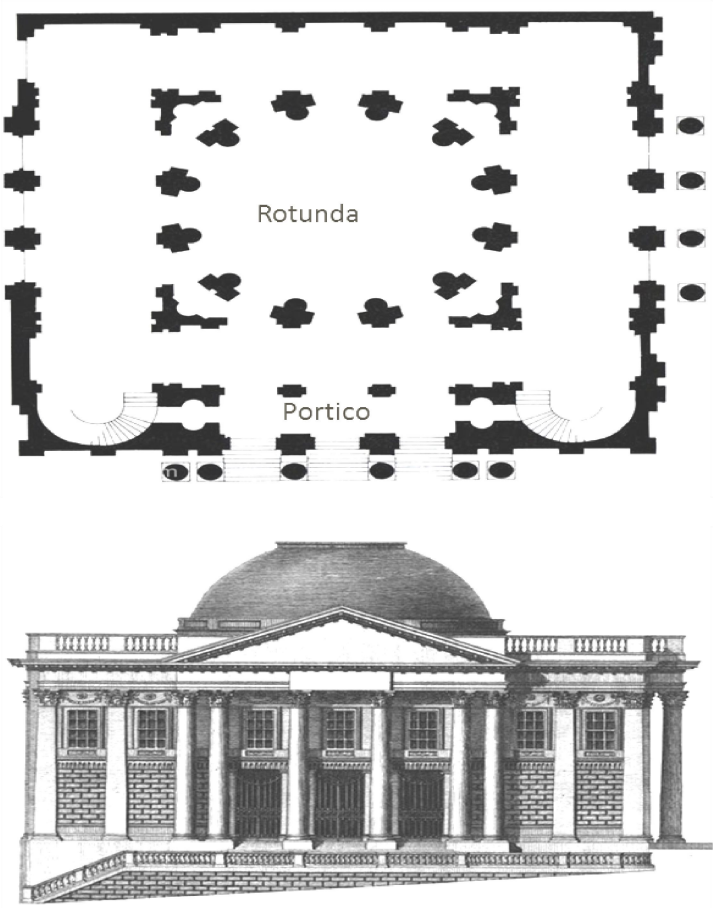


Figure 9: Floor Plan/Elevation of City Hall Dublin designed by Thomas in 1779. Cooley, URL, 7

Georgian style was also rampant during this period, originated from London from the design concepts of Indigo Jones, John Wood, Robert Adam and others through enlarge urban planning (Green, 1904). Using the principles of classicism but in economical manner and paying considerable attention to it adaptability to regional conditions. The grid method of streets/plot pattern was encouraged and contextual conformity vigorously enforced. The use of half Ionic columns without direct bearing on the ground is in the celebrated arrangement. Fenestrations are aligned in a vertical /horizontal rhythm,

incorporating a repetition of components/elements which shows less ornamentation on the facades. The Legislative Building in Delhi, India is an example (Figure 10).

Figure 10: The Legislative Building, Delhi (India). Retrieved from Tear-out postcard Mirza & Sons 1912.

Neoclassicism is the rational steps to bridge the gap through returning to origins with an understanding of climatic conditions of a place. This campaign fostered by the advantage of the Enlightenment period and discoveries from archaeology. The guiding design philosophy rooted in order, form, reason, restraint and discipline. According to neoclassicists, the quest for shelter should be completed with the simple structural arrangement of necessary forms (squares, triangles) and elements that express natural footing to the environment. This tendency to simplicity and disengagement from primitive antiquities influenced British Colonial Architecture significantly and provided the footing for the introduction of modernism. The Court House of Nicosia-Cyprus is a product of this movement following British presence and some architects who were of Greek origin at that time in Cyprus (Figure 11).

Figure 11: Nicosia-Cyprus Law Court

These styles exerted a strong influence on European architecture from 1600 to early 1900 movements in the world. In Malaysia and Singapore with tropical climate expressed a shift from low pitch to the high pitch roofing system, the portico concept was maintained, use of new materials and technologies. The combinations provided the atmosphere for theoretical criticism in architecture as shown by most of the administrative buildings. The total principles that were particular to these styles include the introduction of Rotunda concept, symmetry, proportion, economy, order, definitive form, reason. It is also critical that era developed design and construction of Governmental/ Administrative architecture on a style that is an intertwined of two or more affiliations of the styles.

A general description of the characteristics of this form of buildings includes:

- The Portico arranged with external positioning of Greek and Roman order columns.
- Openings directly to the entrance door centrally positioned.
- Set on a rusticated pedestal (vaulted basement) with balustrade.

- The rotunda surrounded by composite fluted circular columns supporting the copper dome.
- Positioning of the external columns also aligned with the modular grinds of the internal ones.
- Circular high-level and top central window incorporated to the dome for interior lighting.
- Floor mosaic decoration with symbolic meaning.
- Dome ceiling has hexagonal stucco mosaic ornamentation.
- Facades adjoining main streets are highly emphasized in similar pediment treatment with pilasters while the ones facing less visual attention streets received a plainer treatment.
- Staircases are in symmetry arrangement either externally or internally but with links to the portico.

  (Heritage Malaysia Trust, 1990; Melvin, 2005:66-73).

2.3.2.1 British Colonial Transportation Architecture

Transportation infrastructure was one of the machinery that facilitated the operations of British colonization. Railway lines and stations/offices were built to monitor the initial extraction of raw materials in colonies to places of use/Great Britain and the circulation of the British military (Beckett, 2013). The train type in that period was Steam-Engine Locomotive. However, the human conveyance was later included with the payment of tariff. British colonial architecture in Transportation buildings was predominantly in neoclassical characteristics with the combination of other styles already explained the previous heading. Apart from height/volume variations, other characteristic shown in transport building depicts similarities in the use of materials and construction methods.

For instance, the train station building in Nicosia and Famagusta, North Cyprus shows this similarity of application (Figure 12).

Nicosia Train Station (15.04.2015)

Famagusta Railway Station (20.03.2015)

Figure 12: British Colonial Train Station buildings

2.3.2.2 General Characteristics of Colonial Schools

Colonial school buildings provide a unique identity in spatial and formal organization, proportional use of materials at both contextual position and modern exportation. Showing a rich ensemble of ornamentation and balustrades elements in a conforming scheme that altogether make the school buildings important and exceptional (Figure 13). Colonial schools are among the products exported to colonies by British Settlers (Exite Education 2001-2014). The system was full of regimentation as reflected in the layout of colonial school buildings. Other factors that influenced the architecture of the school buildings was the type of governance in a particular community, age/sex of pupils, the location and ethnicity of the territory. More primary schools were built than secondary since training was reading, writing and arithmetic.

The educational attention accorded to colonies that were Dominions (USA, Canada, and Australia) was more standardized. Thoughtfully, influenced by manpower and infrastructure inputs than other territories: Protectorates, Crown Colonies and Mandated Territories (Asia, Africa). Another type of education that they instituted in weaker colonies is community-based educational system that is still prevalent in poor villages in developing countries today; teaching classes holding in Village Town Halls, family verandas and under tree shades during summer.

Figure 13: Colonial Heights Elementary School 1911-1912 by Cox (2003)

In history, the spatial arrangement in colonial school started as one or two rooms' buildings. The commonest celebrated spatial forms were rectangle and octagon. In America, this was known as 'Schoolhouse' or Dame Schools (Figure 14). It was space for communalism that turned a 'cultural icon' (Theobald, 2010). This trend in some colonies improved into different scales following the enacting of Education Act. Elementary schools were for communities with population of fifty (50) families. While secondary schools (grammar schools) were for settlements with one hundred (100) families as supported by "Lesley Barker" contributions to 'Colonial Education in eHow'. The schools were centrally located in colonies and additionally functioned as a local chapel for Sunday worship services, hosting community activities like meetings and picnics at varied time intervals not conflicting with school hours.

Figure 14: Wells Maine Division nine schoolhouse 2006. URL, 8

The late approach differs because gender segregation was reduced to reasonable degree. Nevertheless, the practice is still happening in some developing countries despite the educational reforms. The further demarcation provided the children of Latin/Greek descent with advanced education while the children of the blacks/vulnerable populations (sometimes called poor ethnic groups) taught only the rudiments in elementary schools. The result was the formation of schools with nomenclatures like Latin schools, Moslem schools, mission schools and Greek schools. Classroom arrangements and sizes are influenced by settlement sizes, school type, and existing ethnic structure. It implies that early colonial classes are physically small in size as seen in elementary schools. The classes range from elementary schools (one or two classrooms) to primary and secondary schools and lately vocational schools or technical schools (Demand Media, 1999-2014; Gelbrich, 1999).

Özgüven (2004) viewed British Colonial schools as a European ideology in public education. According to her, three parameters defined the colonial school architecture:

Administrative control, architect's projection of style and British concept of chapel-like with England social class classification into upper class and middle class. Eventually, public schools were given maximum attention with larger spaces; board schools were remote and had selective accommodation of pupils and parish schools (mission schools) having small structures, and mostly village oriented. With this backdrop, Colonial school buildings are likening to the functional diagram shown in Figure 15.

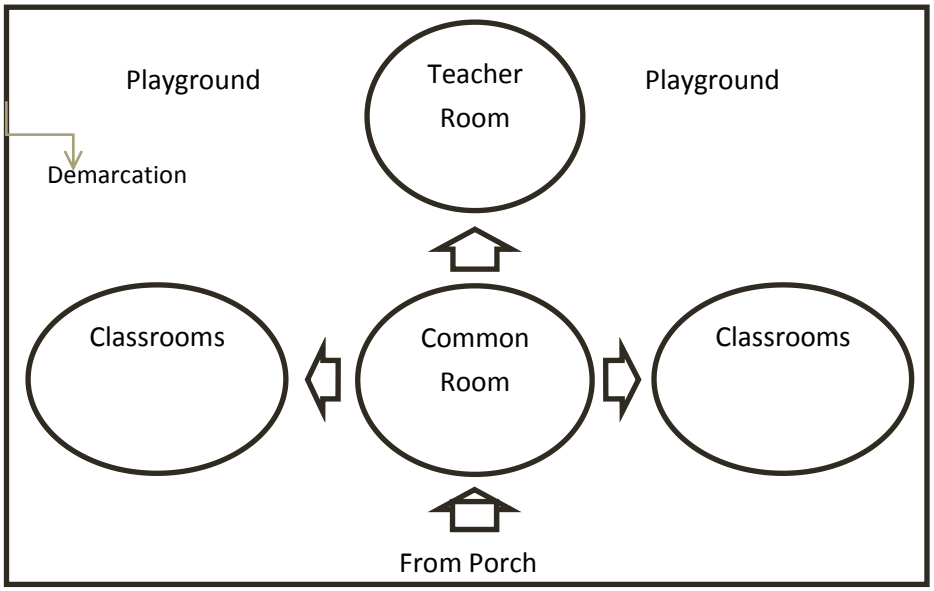


Figure 15: Flow diagram of colonial school layout simplified from (Özgüven, 2004)

Colonial school buildings echo an array of the architectural ideologies linked to classical styles carefully rooted in European architecture (Norberg-Schulz 1975:10-12). The concept of portico is the outstanding identity of the epoch in monitoring and semi-public arrangements.

The concern to document and preserve British colonial school buildings is timely because they are cultural assets of British period that have become an heritage of the areas considered in this thesis. Importantly, school buildings did not only function as

educational buildings but also accommodated social and cultural functions of the localities. Therefore preserving them for future generations is unavoidable.

2.4 Conclusion of Chapter

It is substantial that out of the five types of colonization practiced by the British Empire; only Dominions were given better attention as proven after years of independence of the colonies. The threshold provided, influenced British Colonial Architecture in domestic and administrative buildings with responsiveness in character shown in the adoption of linear spatial organization, 1700-1800s architectural styles (Dutch, Victorian, Palladian, Georgian and Neoclassical), repetition of form, symmetry. The composition of the terms listed, technically creates an architectural niche known as “box philosophy”. The organization of Colonial school buildings possesses a smaller scale since it functions were bracket around teaching of numeracy, reading and writing. However, the demographic growth of colonies influenced a change of approach for more schools as seen during British control. Therefore, the comparison of Colonial school buildings has become an integral part of the study considering their sociocultural and economic values to the colonies in British Colonization Period and after. Their usefulness in present and future time therefore advocates for their preservation for future generations of the communities.

Chapter 3

BRITISH COLONIAL PERIOD IN OLD CALABAR AND FAMAGUSTA

3.1 Introduction

British Colonial policy on the administration, planning laws and educational systems of the Calabar and Famagusta will be discussed in this chapter. British Colonial impacts on physical, social, urban infrastructure and economic impacts on the two regions will be included in the discourse of the chapter using the following themes.

3.2 Calabar, Nigeria during British Colonial Period

British Colonization Period in Nigeria dates from 1885 to independence in 1960. British first entrance in Nigeria was in Lagos, 1862. For administration reasons, regional restructuring was enforced to create a unified state. It will be worthy to include the memory of the invasive slave trade of the 14th century by Portuguese colonists. Nevertheless, British militarization drove this 'set' thereby providing them an advantage atmosphere to operate. Before 1960 independence, the following territories were modified and regrouped to form the colony of Nigeria (Falola, 1999 and KMLA, 2005) Figure 16. While the Map of Nigeria showing the Protectorates (Figure 17).

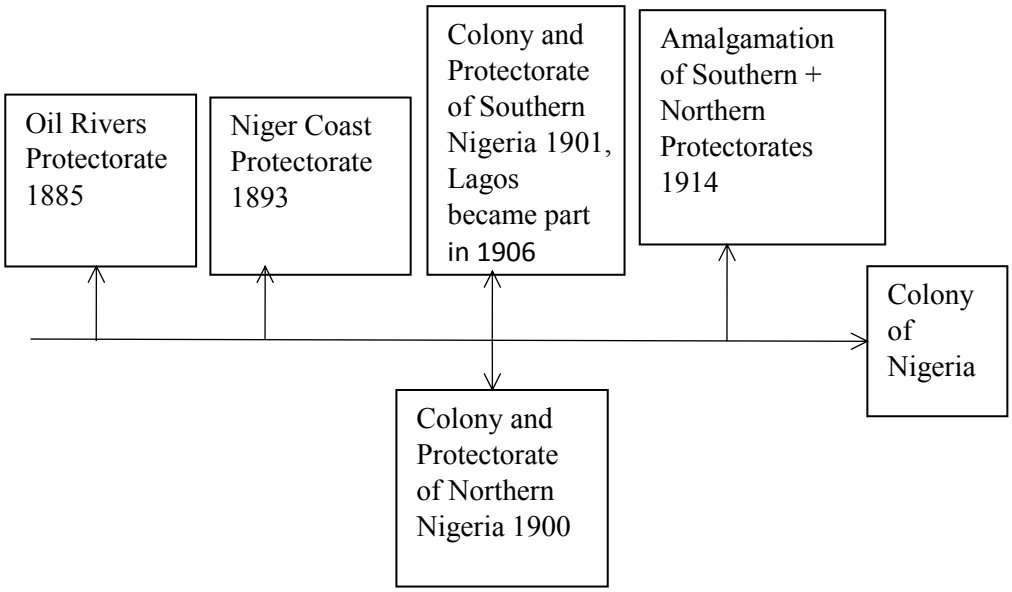


Figure 16: Regrouping process of Nigeria Protectorates organized from Falola's essays.

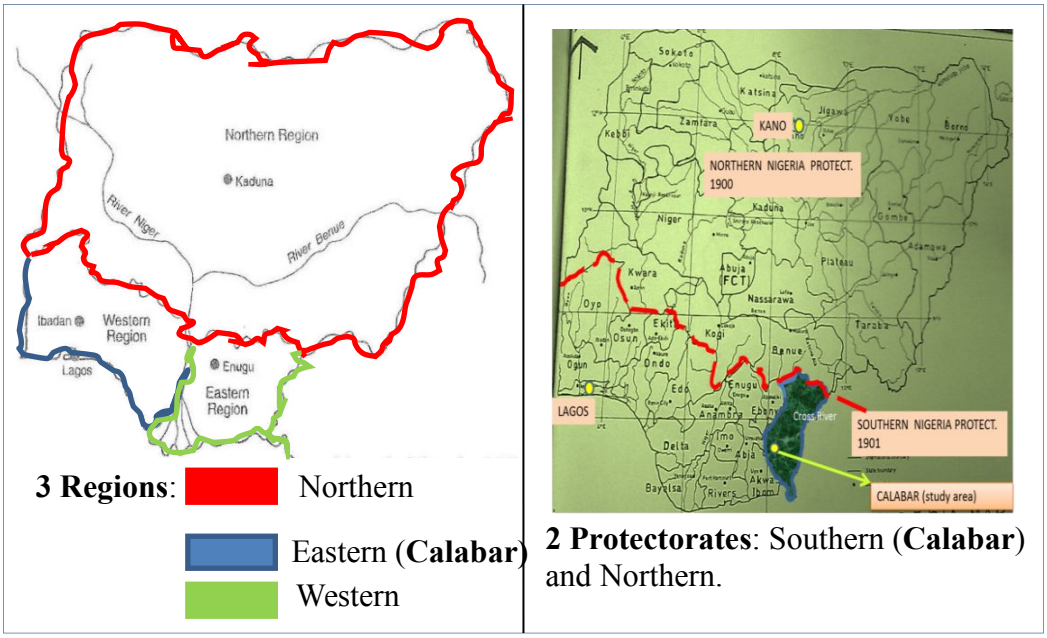


Figure 17: Map of Nigeria in British Colonial Period showing Regions/Protectorates developed from (Ekeh, 1997)

According to National Commission for Museum and Monuments (1986), British Consulates (administrative offices) in the country for various Protectorates were Lagos for Lagos Colony, Calabar for Southern Protectorate and Kano for Northern Protectorate. Data from World Book (2001,2002), indicated that indirect rule in Nigeria as a political

structure characterizing British Colonial system was headed by Sir Fredrick Lugard from 1894 as the commander of troops for Royal Niger Company. The opposition to French forces advancement over a settlement of Borgu in Dahomey on Cameroun/Nigeria borders was terminated by Lugard's troops. Around 1903-1906, Kano and Sokoto (territories in Northern Nigeria) slave trade which enriched their community Chiefs ended. The rulers placed under the control of cooperating with the British Armies. Lugard was appointed the governor of Northern and Southern Protectorate in 1912 and detailed to implement the merging process that materialized in 1914.

After World War I, a coalition of British and French was in place to dissolve German invasion in Cameroun, which included some Eastern settlements of Nigeria (Ebai, 2009). Consequently, after WW II, the country was spitted into three regions in 1951: Northern, Eastern, and Western. However, in 1954, the Federation of Nigeria was established by a new constitution. From 1950-1959, self-government was granted the various regions and a federal Prime Minister appointed. In line with the African ambition to gain political framework, Nigeria became independent in October 1960. Apart from political reforms, British rule in Nigeria resulted in the following impacts in the country:

- Improvement/establishment of infrastructural development for transportation, communication, health, agriculture and education (CMS)
- A stop to adverse slave trade
- Introduction and training of English language as a national language
- Modernization of superstitious inclinations that hamper growth and development
- Establishment of law and order/religious institutions
- The primitive mode of dressing changed to decent ones

- The introduction of currency (shillings/pounds) as means of exchange from trade by barter

  (Aghalino, 2004; Ocheni, et al. 2012; Sulaiman, 2012).

3.2.1 Planning Laws in British Colonial Nigeria

The British Colonial Period in Nigeria introduced a modification of land use from the pre-existing traditional operations that were under head Chiefs and heads of families. The planning, proclamation and ordinances enacted by British Administration from 1863-1960 is as cited by (Ola, 1984; Oyesiku, 2007; NITP, 1991; Omole, et al. 2012) as followed:

- The 1904 and 1914 Land Cantonment Proclamation/Acquisition focuses on separate zoning between the local settlements and that of the Europeans/Government Reserve Areas. The result was the localization of physical and infrastructural amenities in the colonists' colonies than the locations for the indigenous people. The government was invested with the veto powers to acquire land for public use without any resentment from acclaimed occupancy.
- In 1917, the Township Ordinance was implemented in the form of urban settlement classification into three towns: First Class, Second Class, and Third Class. In that ranking, Calabar that is one of the case study area of this research falls under a second class town while other towns like Obubra, Ikom, Oja, and Obudu are Third Class towns that are Local Government Areas in the present day Cross River State. This categorization was ethnic oriented and leveraged city improvements under the control of Town Councils/Town Planning Committees.
- The regulation substituted by Health Boards in 1927 to control epidemic breakout due to quarter's congestion. While in from 1928-1945 restructuring of existing

situation happen due to certain urban challenges in Lagos, which fostered the inclusion of Nigerian Town and Country Planning Ordinance as Law in 1946 in the Nigerian constitution. The revision of the Law by British in the Town Planning Law of 1936 provided the preparation of urban development schemes for the planning authorities.

3.2.2 Educational System in British Colonial Nigeria

The arrival of Christian Missionaries Society (CMS) in the Southern regions of Nigeria by 1842 initiated Western education. Whose training was based on raising middle manpower for the schools, Christian workers and development of the local languages (Ozigi, et al. 1981). The pluralistic nature of the Nigerian setting necessitated three set of educational systems: Traditional, Quranic and Western (Missions) by 1914-1944 (Ogunsola 1975; Fabumi 2005). The school types affirms (Bah-Daiallo 1997; Dupraz 2013) positions that schools in the colonial period included Mission schools, Islamic schools, and Teacher Training Institution. Education Ordinance enacted in 1948, under the supervision of Colonial Education Board for the decentralization of Educational Administration and defines the strategy for the use of grants in –aid to Mission schools (Fabumi, 2005).

Before 1960 independence, the Northern, Eastern and Southern regions promulgated education laws that regionally oriented as approved in the 1952 Federal Education Act. The educational structure operated the in the three areas is shown in (Table 4). According to Tikly (2001) and Imam (2012), education system in Nigeria during the British Period was unstable because of ethnic resistance in some part of the country but provide a background for modification after 1960. Despite the variations in the education Ordinances, the regions were obligated to structure their Education Act by 1944 Education Act of Wales and England. The characteristic features of the various Act show

in the stages: Primary stage, the secondary level (middle school, secondary modern and grammar school) and higher stage (Odukoyo, 2009).

Table 4: Educational system in Nigeria before 1960, organized from (Taiwo, 1980; Fafunwa, et al. 1989) essays. More information from a pupil '(Bassey Obeten)' who studied in the Eastern region in that period and was made a Junior Teacher on January 1959/Grade II Teacher in August 1987

Region	Education System
Southern Nigeria	**4,4,6 System**
	4-years junior primary education
	4-years senior primary education
	6-years secondary education
Northern Nigeria	**4,3,6 system**
	4-years of junior primary education
	3-years of middle school (1-6 classes)
	6-years of secondary education (1-6 classes)
Eastern Nigeria	**2,6,5 System**
	2-years junior primary
	6-years stanza
	5-years secondary

3.3 British Colonial Impacts in Old Calabar, Nigeria

Old Calabar (now Calabar) which consisted of Creek Town, Duke Town, and Henshaw Town forms the historic city of Calabar, currently zoned into two local government areas: Calabar Municipality and Calabar South. Evidence from historical perspective, repute Calabar as the first capital of Old Eastern Region (Cross River, Akwa Ibom, Imo, Abia, Enugu, Anambra and Rivers) before relocation to Enugu, [See Figure 17 '(Ekeh, 1997)']. Three ethnic Kingdoms constitute the cultural setting of Calabar. These includes: 'the Qua, the Efut, and the Efik' Kingdoms. At present, the administrative seat of Cross River State. Calabar is located in the South-South geopolitical region of Nigeria. Calabar also known as the 'people's paradise or Canaan City' is called 'Akwa Akpa' in 'Efik', is coastal city benefiting from the water flows of Calabar/Great Kwa Rivers and Cross

River inland Creeks sometimes referred as ‘Oyono’ by the locals (Nair, 1972; Falola, et al 2007) (Figure 18-20).

Figure 18: Map of Cross River State from Ministry of Lands and Housing Calabar

From the Nigeria context, Calabar falls under the tropical rain forest zone and show the features of hot-humid climate: Average Temperature around the year is 25-30°C while the average Precipitation is 116.5-188.2mm (Weatherbase, 2011). The city bears unique political, socio-cultural and economic significance in the country. The colonial masters took its coastal advantage in that antecedent. Federal Ministry of Environment, Nigeria 2009 rated it: the cleanest city in the country. It is also the first tourism destination with a cap of the end of the yearly carnival celebration. It impacts discussion proceeds in three primary dimensions: Physical, social, economic and urban structures.

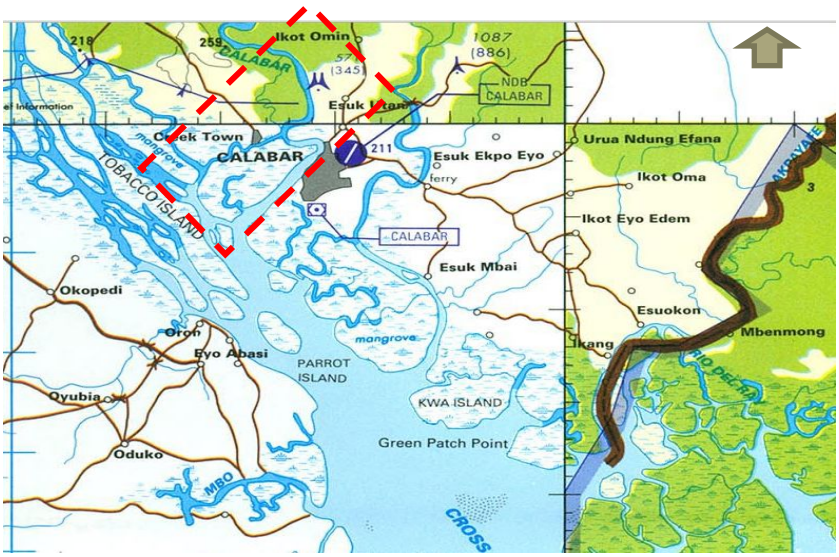


Figure 19: Map of Calabar in British period sourced from Mapcruzin.com [Defense Agency Series, TPC (April, 1996)]

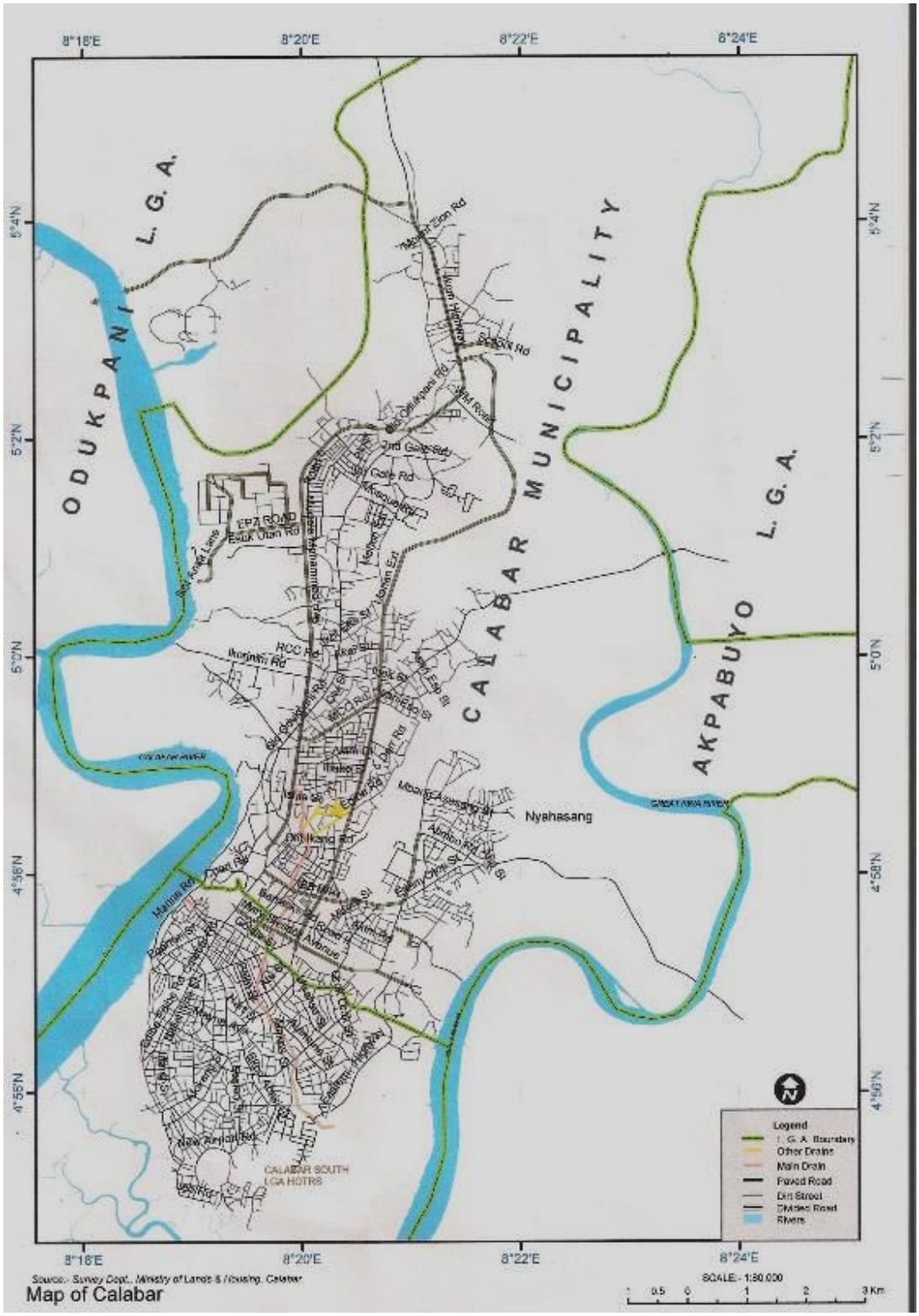


Figure 20: Map of Calabar from the archives of Survey Department Ministry of Lands/Housing Calabar

3.3.1 Physical Impacts

The urban structure improved through the laws and regulations that they established during the British administration and changes the traditional urban patterns. So to speak, apart from Abuja (present capital territory of Nigeria) that is consciously planned, Calabar has an excellent planning urban layout with proper zoning spatial urban arrangements (Eni, et al. 2014). Another peculiarity is the conservative singularity of one major Truck A road (Murtala Mohammed High Way) that links other parts of Cross River State and its neighboring states by land. Notable buildings constructed in the period included:

- The British Consulate (now Calabar Museum) (Figure 21)
- Church of Scotland Mission (first Church in Nigeria built in 1850)
- Hope Waddell Training Institution-first biggest Secondary School established in the Southern Protectorate in 1894 (with other mission schools)
- Cemetery and Storage Houses at Marina (a section of this now converted into the current Marina Resort during Donald Duke leadership as Governor of Cross River State)
- Residence (Mary Slessor's Home)
- First general post office in the Niger Protectorate, Police offices, Court Houses, African Club, Hospitals)
- Army barracks and prisons
- Hopkins Cemetery
- During this period, rubber and palm oil housing estates were built accommodation the workers in Adiabo and Akamkpa LGA.

  (Goldie, 1901; Latham, 1975; Williams, 2003).

Figure 21: British Consulate Calabar

3.3.2 Social Impacts

Old Calabar was the name given to Calabar by the first colonial sets (Portuguese). They evaded the Calabar Port for slave trade before the British militarization that drove them away (Ukpong, 2012). British control in this area and Nigeria dated as far back as 1885-1960. During the British Regime, Calabar served as the capital seat of Government from 1885-1893, before the movement of British Administrative Headquarters to Lagos in 1914 (Wings, 2012).

The British presence in Calabar also resulted in the change of names of Efik head chiefs who were bearing local nomenclature to English ones. The stopping of Atlantic slave trade through Calabar sea route, abolition, and modification of harmful cultural practices to human life was initiated by British Empire through the aid of the seating chief King Eyo Honesty II (Livingstone, 1920; Imbua, 2013). Some Calabar progeny was given a circular education that led them to key positions in the country's administration and fostered positive change.

Apart from the Church of Scotland Mission, other Christian groups like the Roman Catholic, Church of Anglican Mission, and Methodist with the support of the chiefs gained footing in Calabar. The Christian groups also assisted in the establishment of

mission schools/seminary across the territory. The colonialists' education focused on primary and secondary education, meaning the training of literate people who can function as starters and middlemen in civil service. Many primary schools were established but less secondary/grammar schools to maintain the population without any tertiary institution in place. The level of negligence aggravated in manpower training that lacked the know-how for technical and surmounting complex organizational issues (Duke II, 2010:68-69).

The British Colonial Rule in Calabar bluntly marginalized the women in the affairs of the administration that was applicable in the entire country. However, the reaction of Calabar Market women of 1925 affected reforms in the inclusion of traditional chiefs in the affairs of the state (Akpan, et al.1988). Another influence was the introduction of ceremonial Church wedding and linking the coronation of the highest chieftaincy of Calabar (Obong of Calabar) with religious rites. Concurrently, holds an alliance with the Queen of England, the installation of a new 'Obong' must have a representative from the Queen. Recreational facilities were built in their camps for their leisure apart from the Zoo Gardens that opened to the locals. Now converted into Botanical Gardens (hosting Efik cultural performances and with links to Forestry Department) were people can go to watch life endangered species of biodiversity.

The transfer of English Language to Calabar is inclusive as one of the major concerns of British colonization in colonies that dramatically became the official language in the state although indigenous ethnic groups still speak their local languages. The Efik cultural society of leadership/dancing and marriage rites are not destroyed to date. Constituting part of Efik identity in the world as can be seen in the Cuba Folk dance today in Europe through slaves exported from this territory. However, the modern

dressing introduced by the British gained more official attention than any other when considering the policy of formal dressing and work environment.

3.3.3 Economic Impacts

Calabar falls in the rainfall forest zone of Nigeria with abundant agricultural produce that include palm oil, timber, rubber, banana and cocoa from some locational extensions within the state. These raw materials boomed international market at those centuries before the diversion of crude oil. Currently, the present governor of the state Senator Liyel Imoke is working to regenerate palm and rubber plantations as a sustainable alternative to crude oil. There are surviving storage houses at Calabar Marina though a section of it is converted to form the new Marina Resort as part of tourist attraction in the state. The exportation of palm oil through Calabar Port in the Niger Delta boosted the economic potentials of the inhabitants and the surrounding settlements.

The said plantations located around Adiabo, Akpamkpa, Biase and central part of Cross River State where the extraction took place transported to Calabar Port for upward exportation to service UK factories. Some facilities constructed by British in Calabar include the default Calabar Wood Factory, Calabar Cement Company Plant [CALCEMCO (whose stalk is still surviving)] now acquired by UNICEM Factory as sub-office to the main yard at Mfamosing, Oban region dedicated to cement production in the state.

The economic framework of British Colonial administration in Calabar was not agriculturally viable, and the dynamism of sustaining it was weak since methods of farming were mostly primitive. The parameters of British Colonial economic development anchors on two conditions: The situation of unity as an entity and to recruit cheap labor and materials for the sustenance of British Empire (Jackson, 2006: 146-171).

The considerable increment in foreign trade towards independence triggered the establishment of British Banks in the various regions now rated as first generation banks. Calabar is the beneficiary of these financial institutions. The first on the list is British Bank of West Africa (now First Bank Plc), seconded by Barclays Bank (now Union Bank Plc) (Nwankwo, 1980). This economic trend, favored the establishment of Central Bank of Nigeria (CBN) in 1958 also with a branch in Calabar.

Furthermore the enforcement of force labor with an underpayment, despite the low standard of living. Taxation implemented through warrant officers/chiefs, improvement of Watt Market structures to generate revenue. The economic situation attracted the establishment of trading companies like UAC, Pamol, John Holts and Company's, (whose warehouses are spotted around Marina Street to present day). They controlled handling of importation of finish goods from Europe and exportation of raw goods from Calabar. Income generated from sales of farm produce helped families in building affordable cement/zinc houses and the education of their children (Erim, 2012: 175-176).

3.3.4 Impacts on Urban Infrastructure

The presence of British Colonialists in Calabar also influenced the improvement and introduction of hard infrastructures to the city. It duality as an economic center for palm products trading and British explorers' offices/residences attracted attention from the surrounding villages (Latham, 1973). The frameworks of the urban infrastructures during that epoch will be discussed in the sub-themes of this section.

Security

Although some police stations were established, top on the protection of the territory was the setting-up of the earliest military barracks called 'Eburutu' Barracks.

Health

The first public hospital (St. Margaret Hospital) was constructed by British, which custody Nigerian first Medical Records now University of Calabar Teaching Hospital (acting as Annex since the hospital has officially moved to its permanent site) (Figure 22).

Figure 22: St. Margret Hospital Calabar from British period

Transportation/Communication

The first road network with bitumen/coal tar cover was constructed by British. The Seaport was improved but declined in functions when a shift to Rivers State gained more freedom from the locals. Coherent at the time Calabar women reacted and made demands for maltreatment by British officers and Warrant Chiefs on behalf of their husbands' welfare. The oldest post office also established as the head office for other branches in the Niger Protectorate, (Figure 23).

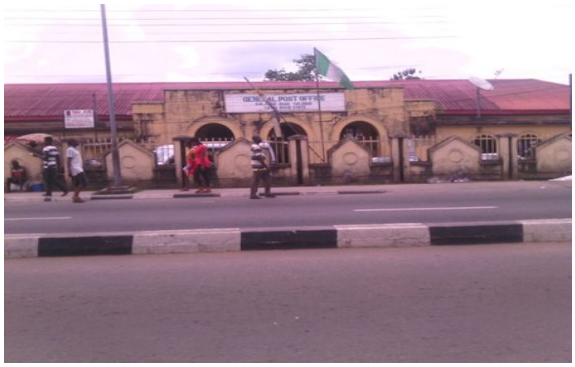


Figure 23: General Post Office Calabar

Electricity

The British brought electricity into Calabar, but the structure of generation was not sustainable as the grids provided selective distribution. Some forest reserve laws were enforced to reduce uncontrolled felling of trees but stand as a challenge to the source of energy for cooking for the locals.

Sewage System

Inbuilt sewage systems were introduced by British in all the buildings constructed in the period for residential houses in the cities breaking away from the traditional methods of separating it from the main building (Scalzo, 2000). The introduction of septic tanks and soak away pits for each building unit and in some housing estate two buildings share a common treatment plant. This type of sewage disposal system was instituted and copied to the rural areas to the present days. The plumbing of sewers from the building to the plants is health wise than direct use of pits/earth surface type.

Water Supply

Rain water was collected by pipes into central reinforced concrete reservoirs for treatment and distribution only in reserved areas. The tank-like system was modified when British Administrative office was taken to Calabar. According to Etowa (2014), the

water scheme in Calabar was constructed by British colonists in 1890 with the name Water Board. It was the first portable water supply system in Nigeria. The board was firstly managed by Eastern Nigeria Ministry of Works in Enugu and Ministry of Works in South-eastern state. When Cross River State was created, the board was separated from the Ministry of Works and the name changed to Cross River Water Board Ltd in 1975. It was formerly at old CALCEMCO site in Essien Town in Old Calabar. The water distribution coverage increased and became wider in the new location on Ndidem Usang Iso Road, Calabar.

3.3.5 British Colonial Architecture Period in Old Calabar, Nigeria

British Colonial Architecture period in Calabar dates back to 16th-19th centuries. Buildings of this era massively represented in different locations in and other towns in that link to Calabar as highlighted in the classification of cities in Nigeria. Just as finish goods exported from UK to Calabar, likewise British architectural styles in form, materials, facades decorations and construction techniques were also transported to the state. The building types range from public buildings, religious buildings, warehouses, residential buildings, recreational facilities and school buildings. British Consulate (Old residency) which is now Calabar Museum is the architectural episode and identity of British Architecture. Other examples in a similar context located in Police Divisional Headquarters, Diamond Hill and Ministry of Women Affairs, Governor's Office, (Figure 24).

Figure 24: Police Divisional HQrs and Ministry of Women Affairs Governor's Office Calabar.

Scholarly works were written by (Ajekigbe, 1997; Bassey, 1986; Braide and Ekpo 1986), classified Old Calabar architecture into three stages; the communal, fragmentation and the post-colonial periods. The scene that relates this study is the fragmentation that outlines intercourse with European slave traders from 1600 and through the period of British control that lasted to 1960. However, a brief reflection of pre-colonial Calabar traditional architecture depicts regional characteristic and traditional construction methods of 'wattle and daub'. The structure implemented through a wall made of wood/mud, roof system of raffia/thatched. These building types are difficult to locate in the present day Calabar except in farm camps, local kitchens and local bars in hinterlands of the state capital (Figure 25).

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Figure 25: Calabar Traditional Building

The early British colonial architecture in Calabar was a showcase of architectural exportation of the Revival styles of Europe. The idealistic expedition in the form of prefabricated houses with corrugated iron roofing sheets coverings over gable roof wooden trusses (Prucnal-Ogunsote, 2001:5). The latter part of buildings constructed included masonry in bricks, cement, cobblestones and sand stones in a neoclassical phenomenon. Although the colonialist's architectural housing philosophy, hangs on social segregation, taken advantage of hilltop and waterfronts. These tendencies did not hinder the Efik people from mimicking and adopting the colonial styles, as the houses of some wealthy trade leaders and chiefs become an evident. An outstanding architectural element that is predominant in Calabar and the present South-south region with a legacy of the colonial role is pitch roofs regarded as 'British roofs'. Therefore in general terms, the structures were built for colonial officials, missionaries, kings, individuals, and groups.

3.4 Famagusta/North Cyprus during British Colonial Period

The readings from (Newman, 1953:200-2010; Orr, 1972; Cyprus, 1987:5-8; Tofallis, 2002:76-104; Sonyel, 2003:1-10), provides the historical involvements of Britain in Cyprus. According to the authors, the eastern Mediterranean Sea militarization changes in trade links and control of Egypt/Asia Minor led the British to the Island of Cyprus in 1878 and gained grounds when Sir Garnet Wolseley mounted the duty of High Commissioner of the Island. According to Wolseley's message from Queen Victoria, their mission will generate the following benefits:

- Attention to improving the well-being of the inhabitants.
- Promoting agriculture and trade.
- The implementation of social justice and freedom.
- The preservation of previous cultural institutions if and only they can keep to the tenets of liberty and modern living.

Early British penetration in the Island was footed on a consensus between the British (Taking the lead in Administration and Financial control), with Turkey (acting as partners) from the Ottoman Empire, which was under-developed through monitoring the operations of the Evkaf Ministry and protection from Russia's subsequent invasion (Sabri, 2014). The pressure of WWI helped the British in the annexation of Cyprus in 1914. The rising of financial constraints and struggle among Turkish/Greek Cypriots led to the conferment of Cyprus as a Crown Colony in 1925. The High Commissioner (Sir Malcolm Stevenson) who functions for the last five years installed the first governor of Cyprus. The British rule in Cyprus ended in 1960.

In Famagusta, the presence of the Walled City as an ancient town and her coastal location received the impacts of the entire civilizations as a point of transportation, communication and commercial activities of Europe and neighboring regions. The settlers' regimes follow Lusignan 1192-1489, Venetians 1489-1571, and Ottomans 1571-1878, 1878-1960 British, 1960-1974 Republic of Cyprus, and TRNC to present time (BBC, 2014). All of the above-listed civilizations had colonial significance on the total way of life of the people (Holland, 1998). The British period in Famagusta, Cyprus (Northern Cyprus/Southern Cyprus), brought about improvement in education, agriculture, port trading, reduction of corruption and Western architecture. The key point is the enlargement of settlement outside the Walled City (Dodd, 1993). More discussions on the influences shall be handling as a sub-theme in the preceding passages. At present, North Cyprus is known as Turkish Republic of Northern Cyprus, (made up of the following Major Towns: Lefkosa - Administrative HQrs, Famagusta, Girne, Iskele, Guzelgurt and Lefke) yarns for reunion with the Southern part in order to fit in the global Civil society. The Map of Cyprus shown in Figure 26 shows the dotted line representing the green line between the two parts. While the study area for the region (Famagusta), is defined by the red outlined.

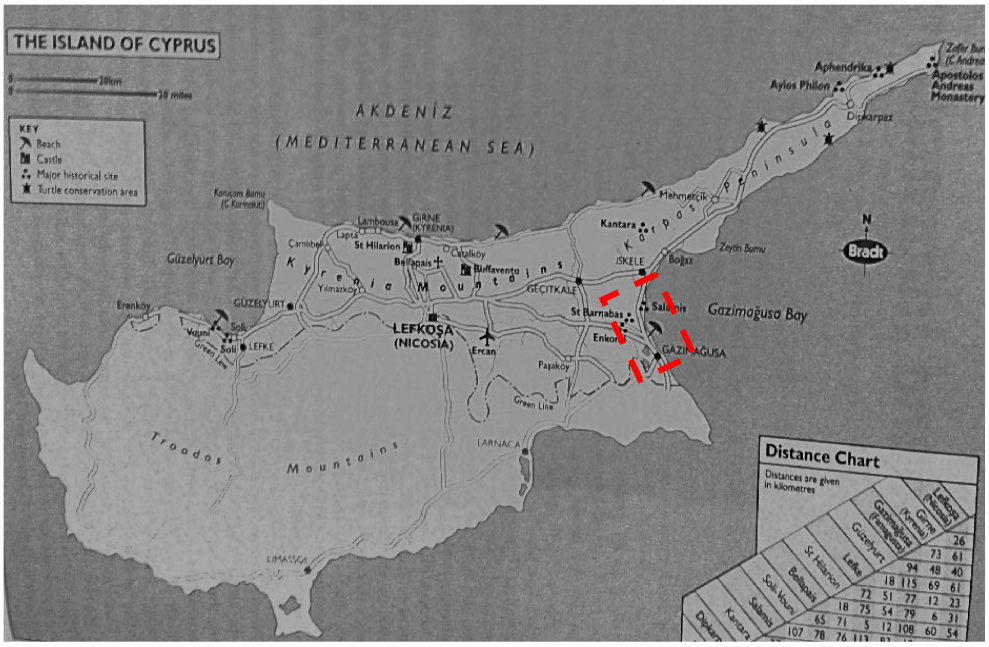


Figure 26: Map of North Cyprus (The portion of red outline is the study area; Famagusta) sourced from Bradt Publications

3.4.1 Planning Laws in Cyprus in British Colonial Cyprus

After WW II, housing need became a major problem in Cyprus. A condition of homelessness surfaced from the hinterlands and the non-Cypriots who spotted Cyprus as a haven for habitation flock in from the Mediterranean settlements. The Planning Ordinances enacted while British Colonial period focused on tackling the generated problem on the Island, especially in Nicosia and Famagusta. The summary of the legislation as quoted by (Christodoulou, 1959:86; Önal, et al. 1999; Varol, 2003; Özgüven, 2004) is as followed:

- In 1927, the regulation on the construction of buildings in new development area called ‘Arazi Mirie’. Creating a general system of land fragmentation rooted on single person per plot and all plot sizes having the same area.
- From 1938-1945, the regulation was revised by two parts: Separation of urban planning and Roads/Buildings Regulation Law.

- While in 1946, due to a deficiency of urban planning specialists, only the part 2 (Roads and Buildings) became operational. An additional revision that enforces the construction of new buildings at (180m) away from the walls of the Walled cities. This policy encouraged the enlargement in the new urban settlements outside the city walls.

3.4.2 Educational System in British Colonial Cyprus

The pluralistic nature of Cyprus in 1878 characterized the existing schools before British Colonial taking over of the Island. Schools in North Cyprus oriented in the ethnic lines as Turkish schools, Greek schools, Maronite schools, the last group did not gain high grounds under British control (Persianis, 1978). Mr. Spencer was a European English philosopher and a liberalist who started the few English schools. Social segregation existed among children of the rich and the poor, in this scenario; Greek Church supported Greek schools while the Turkish government supported Moslem schools (Hook, 2009:187). British enacted the Education Law of 1895 with provisions for local authorities to 'raise taxes' to fund schools. In 1897, 76 schools were operated by through voluntarism and church donations that in later years increased to 179 schools (Papadakis, 2008). In a similar context, following the awareness and grants-in-aid provided by British, the growth of schools (Turkish and Greek) increased in 1881-1901, the statistics shown in (Table 5).

Table 5: Statistics of schools increment in Cyprus, 1881-1901 organized by author from (Newham, 1905)

School	Year	Number of Schools	Number of Students
Greek Schools	1881	99	4907
	1901	273	15712
Turkish Schools	1881	71	1869
	1901	144	5176

According to (Ministry of Education and Culture, 2003; Kambouri, 2012), the education system during British period falls into three stages: Elementary schools, Lower and higher secondary classes. This is represented in (Table 6).

Table 6: Education system in North Cyprus during British Period (Ministry of Education & Culture, 2003)

North Cyprus	Duration of Schools
	6,3,3
	6-years of elementary education
	3-years of lower secondary education (gymnasium)
	3-years of upper secondary education (Either genera education or technical education.

3.5 British Colonial Impacts in Famagusta

History records it that Famagusta (Gazimagusa or Magusa) first settled by Circa around 275BC from Egypt. The Syrian invasion of Salamis in 648AD left survivors who relocated to Arsinoe, which incorporated in the present day Famagusta (Gürsory, et al. 2006:98). British Colonial impacts in Famagusta show an introduction of social demarcation, especially in the early approach. Towards late 1800, a shift of mechanism that was emancipatory was employed. However, their effort remained thwarted following confrontation from the minor's educated groups did not materialize but ended in the separation of the two major ethnic groups by 1974 after the war. The result of the war entirely placed the settlement of Varosha as a ghost town while soldiers are kept to restrict human entrance. The Annexation of Famagusta as a major region in North Cyprus with it historical artifacts of previous Empires engraved into British Crown sovereignty in 1914 (Davson, 1965:352). This annexation opened Famagusta's doors for other occupations and entrepreneurship that elevated it from fishing harbor to a commercial port; Figure 27 shows Famagusta road map in 1878 (Georghallides, 1979). A

walk in and around the Walled City provides a visual appreciation of historical layers and footprints of colonial influences.

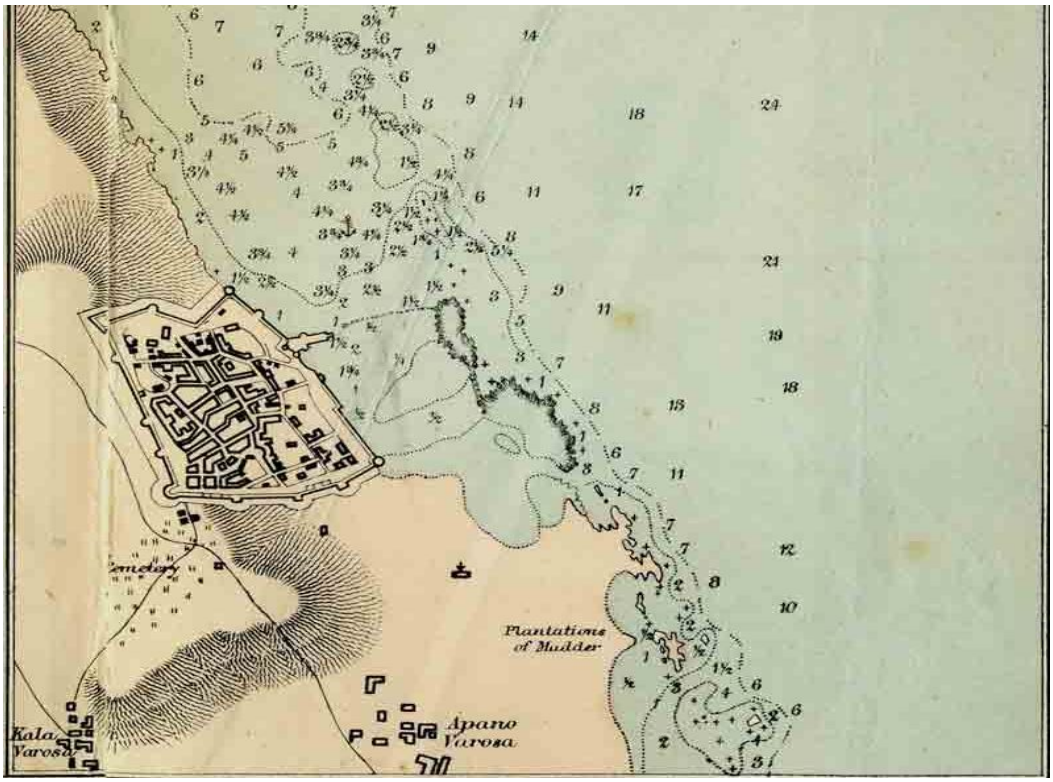


Figure 27: Map of Famagusta in 1878, URL, 8

Famagusta is a Coastal Town with the peculiarity to Eastern Mediterranean Sea (Figure 28). The city is situated eastward of Nicosia, in the North is Salamis and Bogaz with a hot-cold climate that varies through the year (Darke, 2006:3-12).

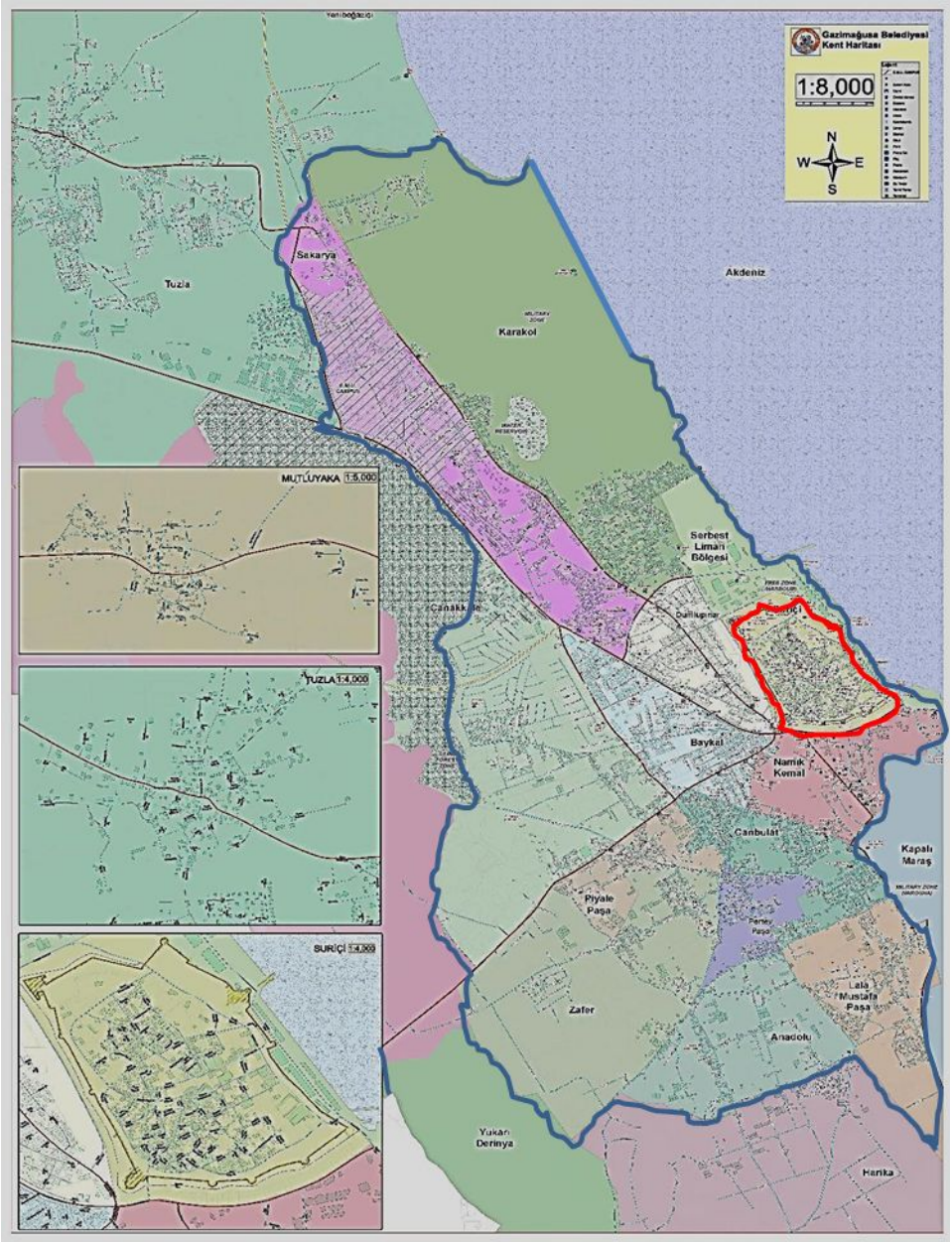


Figure 28: Map of Famagusta showing districts and study area boldly outlined by author(Archive of Planning Department, Gazimagusa Municipality Council) (20.05.2015)

The Britishness in every colony flows gradually from meditating lines to the apex of ruling for the supplanting of their agenda with dependable liberality. They proceed with the establishment of various facilities that enhanced the propagation of imperial ideology and the transference of Western Enlightenment boom. Therefore, the four points of their box philosophy of influence involve: physical, social, urban infrastructures and economy

that manifested in the improvement of agriculture, port activities, education, transport and other amenities as it concerns Famagusta.

3.5.1 Physical Impacts

In Gazimagusa, the British experts' surveyors spotted it as a safe coast and cost effective to develop for the socioeconomic linkage with Egypt and the surrounding neighborhood. The sources analyzed reveal that the two functioning harbors at the south of Cyprus (Larnaca and Limassol) did not possess the potentials seen in Famagusta. Their report did not receive positive attention from the governor following the small overhead derivations from Famagusta in 1800. Fortunately, in 1900 the Secretary for the Crown Colonies (Mr. Chamberlain) negotiated the approval for concentration on the physical development of Famagusta to the British Council. He lobbies by pointing out the advantages of investing in the place to the colonial business. The actualization of his proposal further changed the peasant conditions of Famagusta to a commercial Harbor (Orr, 1972:152-159). The expanse of physical buildings/structures includes:

- Bridges/Harbor and Railway line: Famagusta Harbor gained it functions in 1906 as in Venetian times; olive canals and warehouses in the walled City of Famagusta to house agricultural products and mines from open weather (Figure 29).

Figure 29: Famagusta Harbor

- The railway line linking Nicosia the state capital with Famagusta completed and a shift from transporting farm produce with the beast of burden to the train took place. The train station now Famagusta's Department of Land Registry also constructed (Figure 30).

Figure 30: Gazimagusa Railway Station and First Locomotive Train

- Administrative buildings: The Post Office in Famagusta was established to handle the dispatch of mails and parcels within and outside other colonies Egypt, Syria and Asia (Figure 31).

Figure 31: Gazimagusa Post Office

- The erection of Municipality building by British after materialized as a result of their interest on investing in Famagusta Harbor and structured to coordinate the general public affairs of the district (Figure 32), showing complete late 1900 modern approach of architecture in Famagusta.

Figure 32: Famagusta Municipality

- Housing: The City housing areas expanded outside at the periphery of the Walled City close to Maras district with a face-lift from the yellow stones.
- Schools: The existing heterogeneous system of schools at the elementary level did not encourage further training in Famagusta before the British occupation. Only the children of wealthy parents could afford to train their children in secondary schools only located in Nicosia. The British supported the establishment of more primary and few high schools but with strong tight with Greek Cypriots or Turkish Cypriots.

3.5.2 Social Impacts

The British control in Famagusta introduced a modern political system that became alien to the inhabitants of this region who coexisted for centuries. The current names (Greek Cypriots and Turkish Cypriots) were pronounced in British rule (Varnav, 2009: 127-279). According to Ahmet (2013), the solidarity for the Cypriots unity was melted due to close-knit and campaign with motherlands (Greek and Turkey). He went further to

explain that the failure of the colonialists to surmount this pressure based on two indicators: the under-rating of the potentials of the Island and the weight of external contenders. In another hand, their political affluent after WWII became an afterthought even though it productive at the time.

The awareness and processes to August 1960 independence evaded the British administration instituted. The overall cultural system of the inhabitants of the settlement changed from neighborliness to individuality living. The management of ethnic groups and schools in the early period of penetration left to the leadership of each folkloric (Calotychos, 1998). However, with the engagement of architects from Britain and Greek, technical impacts were created in school buildings and other public ones of which symbolic styles denote meaning and associations to Europe. The left side drive is another product of British Colonization that is predominant till date. Jewish refugees from the Holocaust inhabited in Famagusta in British confinement Camps.

Development in tourism facilities initiated by British especially in the Varosha were large spots of resorts were built. The social institution supported tourist interest of the city on the Island. It progress after independence following government and private sector involvement had given the city an image in the tourism industry.

3.5.3 Economic Impacts

The primary occupation of Famagusta was agriculture and fishing before the British possession. A variety of fruits and vegetables was dominant with a little deposit of mineral resources. Citrus was the principal export commodity before 1960. Manufacturing activities were light in the production of export materials like copper, chromite, iron pyrite, asbestos and cementite that presently is on extinction. The network

of developing some sections of Famagusta for tourist started, and Varosha was beginning to mature before the eruption of the crisis that affected the area (Seddon, 2004).

The improvement of Famagusta harbor in 1906 opened ways for commerce with the Levant in Europe. The railway (with HQrs in Famagusta) and irrigation projects are economic inputs of British but were not sustained. The railway starts from end West part of island Lefke (Mining) city and end up in Famagusta (harbor). They were carrying mines to Famagusta docks. A currency '(Piastre)' for trading (equivalent to 9 shilling) introduced in 1928 (Papadakis, 2014). Most of this economic activities attracted people from the villages to settle in Famagusta for employment reasons. The upgrading of Ottoman, housing scheme led to increased tax burden on the users.

3.5.4 Impacts on Urban Infrastructure

The British governance in Famagusta as a sea harbor that provided a socio- economic base for the extraction and transportation of materials used in developing Suez Canal in Egypt. Substantially changed this historic fishing town into a commercial city which in an away improved the standard of living of the dwellers through education, housing, administration and so forth.

Security

British concentration camp was in this town though not available now because of ruins. The primary focus was to safeguard the docks and penetration of invaders. The idea to establish a naval base in the zone aborted due to political tensions in the Island.

Health

During British period in Famagusta, the old Famagusta State Hospital was built on Polat Paşa Bulvari road as a quick intervention to solving the health challenges on the island.

The hospital is today closed and the site use as a branch of Istanbul Technical University, Famagusta.

Transportation/Communication

Bridges and road construction accommodated lots of employment and existing roads mileage was increased. The proposal for the railway network realized in 1905-1906 for the conveying of minerals, but two years later the inclusion of human passengers was incorporated. The extension project and sustenance of it was terminated by World War ruins. The post office HQrs in the capital Nicosia had a branch in Famagusta as stated earlier and shown in "(Figure 31)". There was strong communication network between Famagusta and Nicosia and with other external colonies following it commercial status.

Electricity

The development of electricity grid was in 1903 but in a limited supply from thermal power stations. This innovation also helped for the furtherance of safe water provision in Famagusta.

Sewage System

Sewage disposal in Famagusta during British period was the use of septic tanks per household. Although, faced with sanitary challenges that later paved way for the establishment of Sewage and Drainage Law (Kotsila, 2010). The law concerns the management of urban waste water as it is today, that is; every village with 2000 inhabitants should have a treatment plant (WDD, 2003).

Water Supply

In 1898, British government made first attempt in Famagusta to construct a reservoir but was abandoned. After conducting visibility studies using geological experts, mandate was given to the Department of Water Supply and Irrigation in 1940 and 1950 to handle the construction of small irrigation works in all districts in Cyprus including Famagusta (part of the study area). In Famagusta, small dams and reservoirs with distribution channels made of concrete were positioned at strategy points to service the community in 1956 (WDD, 2003). For instance, the legacy of the water taps is preserved opposite Famagusta Municipality building and at Nemal Kamal area in the Walled City of Famagusta (Figure 33).

Figure 33: Concrete water supply channels in British period

3.5.5 British Colonial Architecture Period in Famagusta, North Cyprus

Before British Colonial Period (1878-1960), Famagusta was endowed with the antiquity of past civilizations of different empires, especially in Medieval structures. The city shows a picturesque of Orthodox churches, mosques, and castles/city walls that have defined the architectural heritage of the region. The British architecture particularly

concentrated on form, details, and material usage which elaborate a movement from Cyprus building styles (Figure 34) to western architectural styles.

Figure 34: Cyprus traditional housing style from author's archives

British urban infrastructural legendary went viral in commercial, new housing, recreational, development tourist oriented outfits/areas and administrative buildings (Phohaides, 2004:2-3). New materials replaced local ones and likewise the use of massive forms. Stones were broadly use owing to it abundance in Famagusta but was overshadowed by concrete through lines of experimentation though not entirely wipe out. The introduction of the neoclassical style, the portico concept with large arch opening defining entrances, pitched roofs and quoin around external fenestrations and building corners as represented in administrative buildings (Özguven, 2004).

3.6 Conclusion of Chapter

At the end of Chapter 3, the study informs that British presence started in Old Calabar, Nigeria 1885 and Famagusta, North Cyprus 1878 but ended in 1960 in both regions. The

colonization type implemented in Nigeria was Protectorate while that of North Cyprus was Crown Colony. The planning laws of both contexts were developed and patterned after the colonizer's country planning ordinances. The enacted laws were favorable to the colonial masters and unsustainable for the colonized. Educational system approved for Nigeria was regionally structured but operated a common educational system for North Cyprus. The two cities are coastally situated. Calabar climate is hot- humid while Famagusta has a hot-cold climate. British physical impacts were enforce in the construction of governmental, religious, schools, courthouses and storage buildings and housing. The making of English language as an official language and the introduction of recreational facilities were social impacts they inculcated in the colonies. The urban infrastructures were in security, health, transportation/communication, electricity, sewage system and water supply which improved the living conditions of the settlements. The improvement and building of commerce facilities fostered the extraction of raw materials to Europe, tax burden on locals but the structures set in place also supported the economic development of the study areas. British colonial architecture influence on both regions indicates two phenomena: The hybridization of local with European styles and a technical shift to modern architecture.

Chapter 4

ASSESSMENTS OF THE BRITISH COLONIAL SCHOOL BUILDINGS IN OLD CALABAR AND FAMAGUSTA

4.1 Introduction

The discussions on this section will involve a detailed explanation of the methodology employed for the assessment of the cases; the selection criteria will followed by the analysis of the selected cases from the study areas: Old Calabar (Nigeria) and Famagusta (North Cyprus). The cases that will be analyzed from both contexts depict tangible and intangible heritage values as significance. Remarkably confirming the reasons for comparing the school buildings of British Colonial Period in the two towns.

4.2 Methodology of the case study Area in Calabar and Famagusta

The review of British Colonial Architecture discussed in the theoretical framework in Chapter 2 shows the character and approaches used in different countries by British Empire. In this theme, the methodology for comparing the cases (school buildings) will include physical analysis. The field study areas are Old Calabar in Nigeria and Famagusta in North Cyprus. The techniques will involve two phases:

- Historical Analysis of the schools through documents and elite interviews of key personnel.
- Architectural Analysis: This section requires identification of existing building types via field survey with the aid of maps, photographing and making selection. The field study will be complemented with physical observation on two parameters (physical analysis and measurement of buildings). The physical analysis will entail:

(1) Architectural assessment (Spatial, formal, architectural elements, functional analysis, building materials and structural system). (2) Reproducing measured drawings of the plans, section, roof, elevation, facade elements and condensing data for the evaluation proper as contained in an Inventory Card format shown at Table 7.

Importantly, the analysis of the cases will provide the necessary data for the computation of the comparative aims and objectives of the study. The social survey involves obtaining information and permission from existing organizations/instruments of government that relates the schools as a parastatal of the state. It will also involve elite interviewing of personnel of the institutions and authorities (Heads of the schools, Assistant Headmaster, and the English Teachers in some cases because of language barriers), the interviewees during the process opt-out from the inclusion of their names in this study. Therefore, all inquiry should be directed to the researcher of this thesis. The Inventory Forms are given in (Appendix A).

Table 7: Inventory Card

INVENTORY FORM: BRITISH COLONIAL SCHOOL BUILDINGS.....								LOCATION MAP
Inventory No		Street			Date			
HISTORICAL INFORMATION								
Name		Construction Year		Owner				
School Type		Current Use						
BUILDING CHARACTERISTICS								
Size		Materials		Construction Technique				
No of Floors								
VALUES								
Historical		Aesthetic		Economic		Educational		
Social		Religious		Environmental		Architectural		

PLAN	ROOF PLAN
	ELEVATION
SECTION	PHOTO

ARCHITECTURAL ELEMENTS				
PORCH	DOORS	WINDOWS	CORNICE	STAIRCASE/BALUSTRADES

Researcher's Name: Ejeng Ukabi, MS Arch. EMU, North Cyprus

4.3 Selection of Case Study Buildings

From Calabar, the study area targets at the present day geographical setting of the city although some historical remarks mentioned in the literature part on her transitional modifications from Niger Protectorates to Eastern region of Nigeria. Six (6) cases are selected from Calabar. Around the Old town (Henshaw Town and Duke Town), there are some schools established during the British period but the survey reveals that they received intervention aids from 2007/2008 ETF Scheme through the Federal Government of Nigeria (ARCHTIK CONSULTANTS, 2012). The intervention works implemented in the excluded cases is purely reconstruction. Apparently, the character of the replaced buildings is changed while maintaining its functions. Figure 35 shows the location of the cases on the map of Calabar with the dotted line indicating the boundary of Calabar South L.G.A from Calabar Municipality L.G.A.

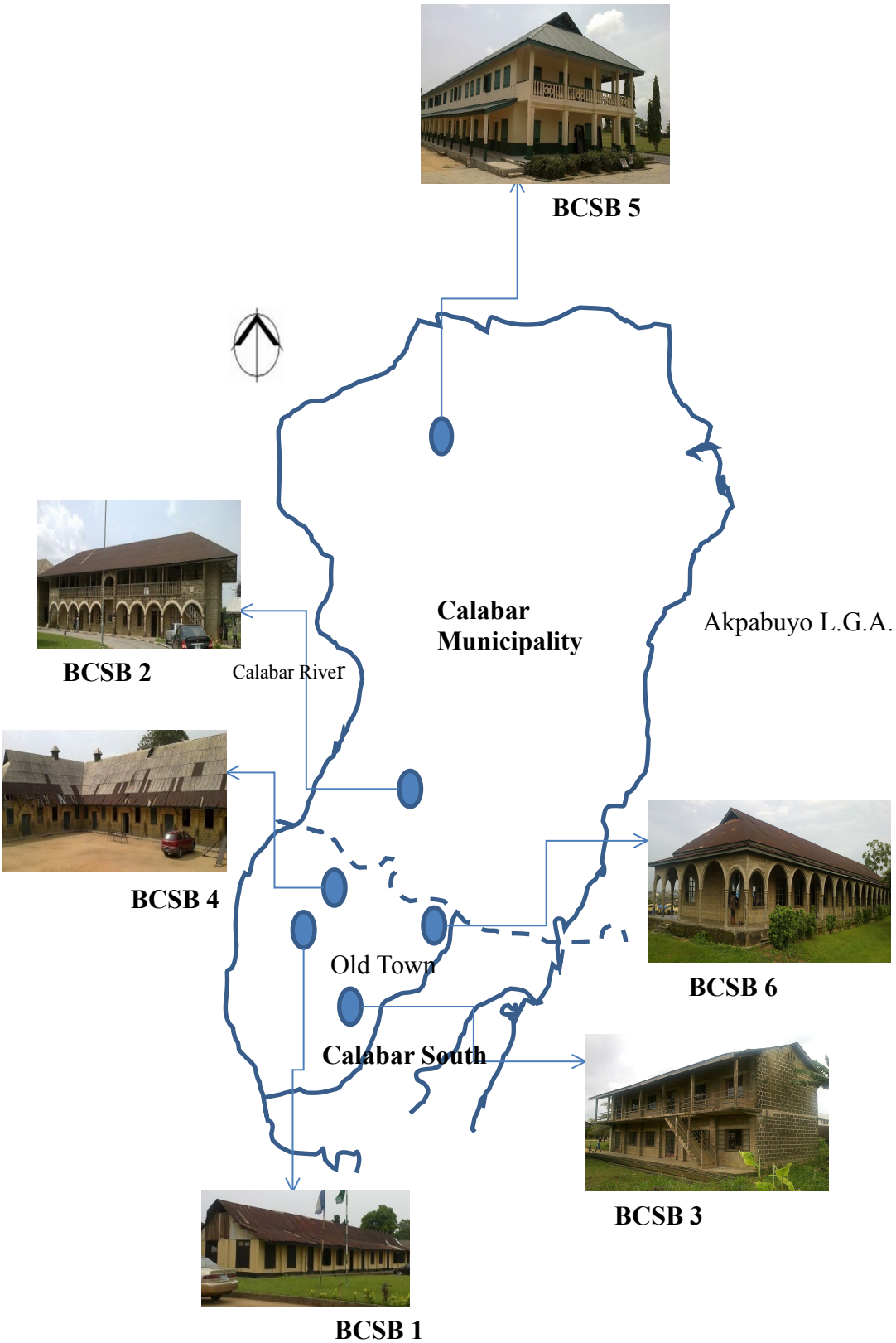


Figure 35: Case map of Calabar

Within the Old City (Henshaw Town and Duke Town), two cases (Duke Town Secondary School and Duke Town Primary School) are located. Duke Town Secondary School has boundary with Anderson Street, Effiwatt Street, Beecroft Street and Boco Street. Opposite the Cemetry and Anderson health center in the Southern part. Duke Town Secondary School with an Inventory Form no. (BCBS 1) is under Calabar South LGA. It is built in 1846, owned and administered by the Presbyterian Church Nigeria (PCN)and with a population of 650 students (all students' included are gotten from the Vice principal or Asst. Head master of the schools).

Hope Waddel Institution is oriented in Diamond Hill directly opposite Governor's Office on Leopard Town Road but Calabar Municipality. In the North, is opposite Police Divisional Head Quarters. Hope Waddel Training Institution has Inventory Form no. (BCSB 2). Its establishment dates back to 1894, functioning as a secondary school for boys, governed and operated by PCN. The school accommodates 850 students.

Edgerly Girls Secondary School located at the East edge of the Old City on Edgerly Area at Chamer Street, midway of Mayne Avenue and Mbukpa Road, Calabar South LGA. Edgerly Girls Secondary School (BCSB 3), located on Edgerly area in Calabar South LGA. Its construction dates 1898 owned and operated by PCN and with a population of 500 students.

Duke Town Primary School located within the premises of Duke Town PCN. The streets that demarcate the school are Eyamba Street, Offiong Street, and Eyo Edem Street, in Calabar South LGA. It is opposite Eyamba playground on the West Cardinal. On the North is Marina Magistrate Court and at a short distance to Ekpe Hall on the South-West Pole. Duke Town Primary School (BCSB 4) share similar locational and

management machinery with Duke Town Secondary already discussed but built in 1910. The school has a population of 180 pupils.

St. Patrick College (SPC) located on Federal Housing Area along Old Odukpani Road (referred to as Old Road in British presence), by SPC Road. The school is opposite Eburutu Barracks in Calabar Municipality (part of Urban infrastructures constructed during Britishness in Calabar as stated in the literature section). SPC is a Secondary School for boys (BCSB 5). Built in 1934, owned and operated by Roman Catholic Church Mission with a population of 800 students.

Holy Child Girls Secondary School also located in Calabar South LGA is at Goldie Street by Marian Hill and at proxy with Mary Slessor Roundabout. Holy Child Girls Secondary School (BCBS 6) was constructed in 1953, located at Marian Hill Area in Calabar South LGA. It is owned and operated by Roman Catholic Mission. It has a population of 480 students.

Since the authorities do not register the school buildings, their heritage values are proving their importance and calls need for their registration and preservation. Accordingly, all the selected cases from Calabar possess the following heritage values. Historical value because they are the first and oldest educational assets in Calabar built by British Colonists in the period 1800-1900. The buildings investigated are presently scarce and requires reasonable funds to construct and manage, therefore they have economic value. The buildings show the architecture of British Colonial Empire outside Europe and relevant for research. Thus, they have educational value. The character of the buildings and the stylistic approaches used display European styles of previous epoch, therefore they have architecture value. Their location within the historic urban quarters

and neighborhood with the large portions of greenery is helpful for the purification of the surrounding atmosphere and reducing urban island effect, giving them potentials of environmental value. The whole schools are own by missions till date thereby qualifying them for religious value.

The number of cases selected in Famagusta amount to eight (8). There are two other schools (one from the Walled City, renovated and reuse for social functions and another in Namik Kemal District), constructed in the period as mentioned previously. The two schools are excluded to meet up the principal objectives of the study. The locations of the cases are displayed in Figure 36.

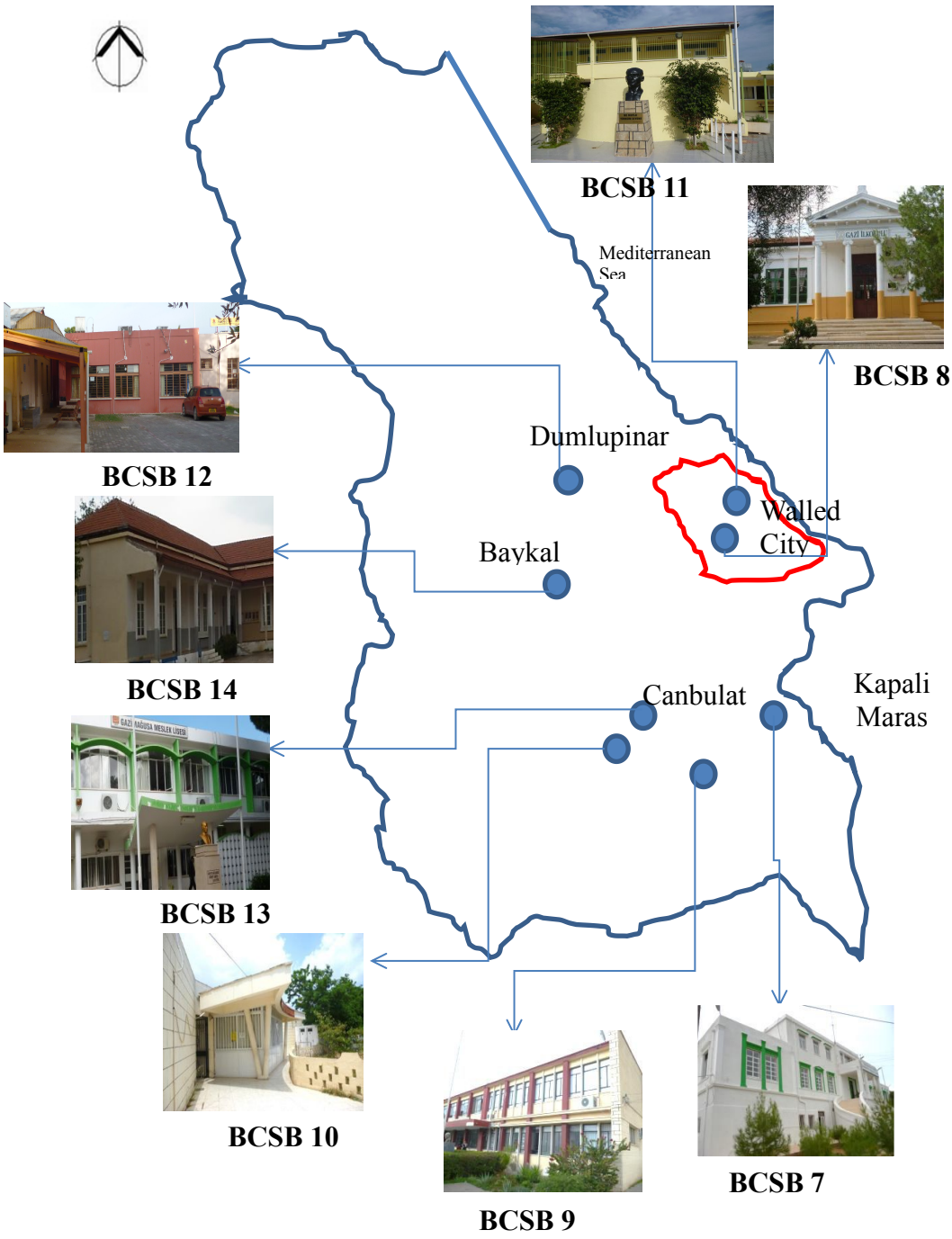


Figure 36: Case map of Famagusta (Author, based on the study area)

All Famagusta cases presently belong to Turkish Republic of Northern Cyprus (TRNC) government. The ownership materialized after the 1974 war that resulted in the separation of Greek Cypriots/Turkish Cypriots. Two cases located in the Walled City (Gazi ilkokulu and Canbulat ilkokulu). Gazi ilkokulu (BCSB 8), is located in Namik Kemal Square bordered by Namik Kemal Sokak and Necip Tozun Sokak, on the North

axis opposite the Twin Churches of the Templars and Hospitaliers and Cafer Pasha Hamami/Ottoman Bath-House. The school at present functions as a primary school and houses a population of 160 pupils.

Canbulat ilkokulu (BCSB 11) is primary school located along Cengiz Topel Sokak by Cafer Pasa Sokak at close range with Othello Castle and the ruins of St. George of Latins on the North-East side and bordered by Gazimagusa Maarif Ana Okulu on the North-West axis. It establishment year is 1959 and having a total number of 120 pupils.

Four cases (Endustri Meslek Lisesi, Canbulat Özgürlük Ortaokulu, Polatpasa ilkokulu and Gazi Mağusa Meslek Lisesi) are located in Canbulat District, concentrated on Ziya Gökalp Caddesi. On the same road, Endustri Meslek Lisesi (BCSB 7) is a vocational school situated by Ulubey Sokak (at the edge of Varosha (Ghost City), established 1906 with approximately 110 students.

Canbulat Özgürlük Ortaokulu (BCSB 9) is a secondary school located by Cengizhan Sokak, constructed 1950 and with a population of 650 students. Polatpasa ilkokulu (BCSB 10) is by Aktarmaç Sokak, the year of establishment is 1955 with 180 pupils. Gazi Magusa Meslek Lisesi (BCSB 13) is a vocational school located by Ataç Sokak/ Dantel Sokak, established 1959 and with a total of 119 students. Sehit Huseyin Akil ilkokulu (BCSB 14) is a primary school located in Baykal District and along Ibrahim Kazim Cad before Bayrktar Yolu Sokak Roundabout. The school dates back to 1959, and the population of the school are 140 pupils. Alasya ilkokulu (BCSB 12) is primary school located in Dumlupinar District, close to Gazi Mustafa Kemal Bulvari/Topcu Bulvari Junction before Osman Fazil Polatpasa Camil Roundabout. The school constructed in 1959 and held a population of 200 pupils.

The evidence of the cases selected from Famagusta as part of administrative buildings constructed during British Colonial Period, 1800-1900 is a proof of their historic value. The possibility of putting the school buildings to other uses as revealed in the field study (Walled City of Famagusta) characterizes them as having economic value. The buildings have become neoclassical tools for learning and research in the present age, therefore they show educational significance. The physical fabric of the buildings are traceable to the architecture of past styles and movements, this is their architectural value. The school buildings have become part of the organic layers of the environment and artifacts for identification and description of their place and setting, even for visitors, they possess environmental value.

To simplify the bulk of the cases from both regions, the brief of each case from Calabar and Famagusta is tabulated in (Table 8).

Table 8: Brief of Calabar and Famagusta cases (Author's compilation from field survey information)

BCSB	Name of Case	Year Built	School Type	Ownership	Pupils' Index	Location
Calabar, Nigeria cases						
1	Duke Town Secondary School	1846	Secondary	Presbyterian Church Nigeria	650	Henshaw Town, Calabar South
2	Hope Waddel Training Institution	1894	Secondary	Presbyterian Church Nigeria	850	Diamond Hill, Calabar Municipality
3	Edgerly Girls Secondary School	1910	Secondary	Presbyterian Church Nigeria	500	Edgerly, Calabar South
4	Duke Town Primary School	1934	Primary	Presbyterian Church Nigeria	180	Henshaw Town, Calabar South
5	St. Patrick College	1953	Secondary	Roman Catholic Church	800	IKot Ansa, Calabar Municipality
6	Holy Child Girls Secondary School	1959	Secondary	Roman Catholic Church	480	Goldie, Calabar South
Famagusta, North Cyprus cases						
7	Endustri Meslek Lisesi	1906	Vocational	TRNC Government	110	Canbulat district
8	Gazi ilkokulu	1924	Primary	TRNC	160	Walled City
9	Canbulat Ozgürluk Ortaokulu	1950	Secondary	TRNC	650	Canbulat
10	Polatpasa ilkokulu	1955	Primary	TRNC	180	Canbulat
11	Canbulat ilkokulu	1959	Primary	TRNC	120	Walled City
12	Alasya ilkokulu	1959	Primary	TRNC	200	Dumlupinar
13	Gazi Magusa Meslek Lisesi	1959	Vocational	TRNC	119	Canbulat
14	Sehit Huseyin Akil ilkokulu	1959	Primary	TRNC	140	Bayka
BCSB – British Colonial School Buildings						

4.4 Analysis of British Colonial School Buildings in Calabar

The analysis is circled on six cases from Calabar as shown in the Inventory Forms (see Appendix A) with cases numbering (BCSB 1-6). The physical and structural characteristics of the buildings are determined by the architectural assessment of the cases both from the observational point and reproducing the drawings.

4.4.1 Architectural Assessment

The assessment conducted encompasses:

1)Spatial organization

2)Formal organization

3)Architectural elements

4)Functional assessment

5)Building materials and structural system

4.4.1.1 Spatial Organization

Spatial organization is the description, composition and sequence by which the spaces of a building are structured (Von Meiss, 1996). The manner in which the spaces of a building relate with one another is distinctive for identification. A spatial character is a tool for determining the flow of architectural spaces and assessing circulation in structure. The concept of space organization gives order to space in two parametric ways: The outside to inside and the indoor to outdoor (Tuan, 1977). The spatial organization focuses on interior spaces of the cases. The spatial structure of the British Colonial school buildings from Calabar is sub-divided into two groups when appreciating the similarity of their arrangement. The first group comprises the cases with a single floor layout and the second group is the cases built with two floors.

Group 1: Case BCSB "(1, 4, and 6)" [Duke Town Secondary School, Duke Town Primary School and Holy Child Girls Secondary School]

The spatial organization type for the three cases listed in this section is a linear organization. The arrangement of spaces show strong connections to the terrace which is public space. In case BCSB 1 (Duke Town Secondary School), the terrace provides a feeling of openness to the public. Primarily, defining all entry into the semi-private spaces (teachers room, counseling room, and subject master) and the private spaces (classrooms). The semi-private spaces are placed on the west side of the building while the private spaces are on the East side. The teachers room, placed next to the counseling room, and the subject teacher office follows. The spaces zoning quickly shows that;

spaces with similar functions are arranged closely for easy circulation and functioning (Figure 37).

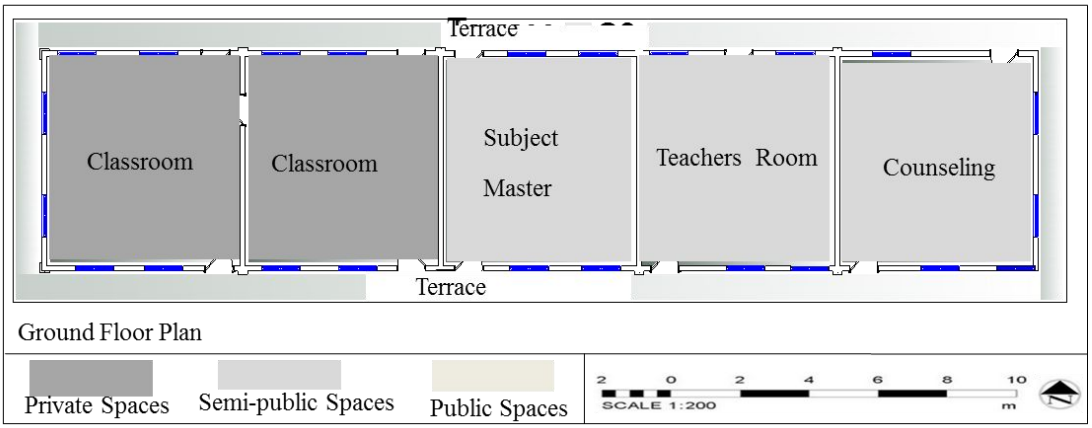


Figure 37 : Spatial organization of case BCSB1(Duke Town Secondary School)

BCSB 4 (Duke Town Primary School), depicts a similar organization as Duke Town Secondary School, but the distribution of the private spaces stand at two ends of the building. The classroom, store/archives constitute the private spaces while the teacher room is semi-private space. All spaces open to the terrace that surrounds the building except the store/archives which is firmly tight to the teachers room because it custody confidential documents (Figure 38).

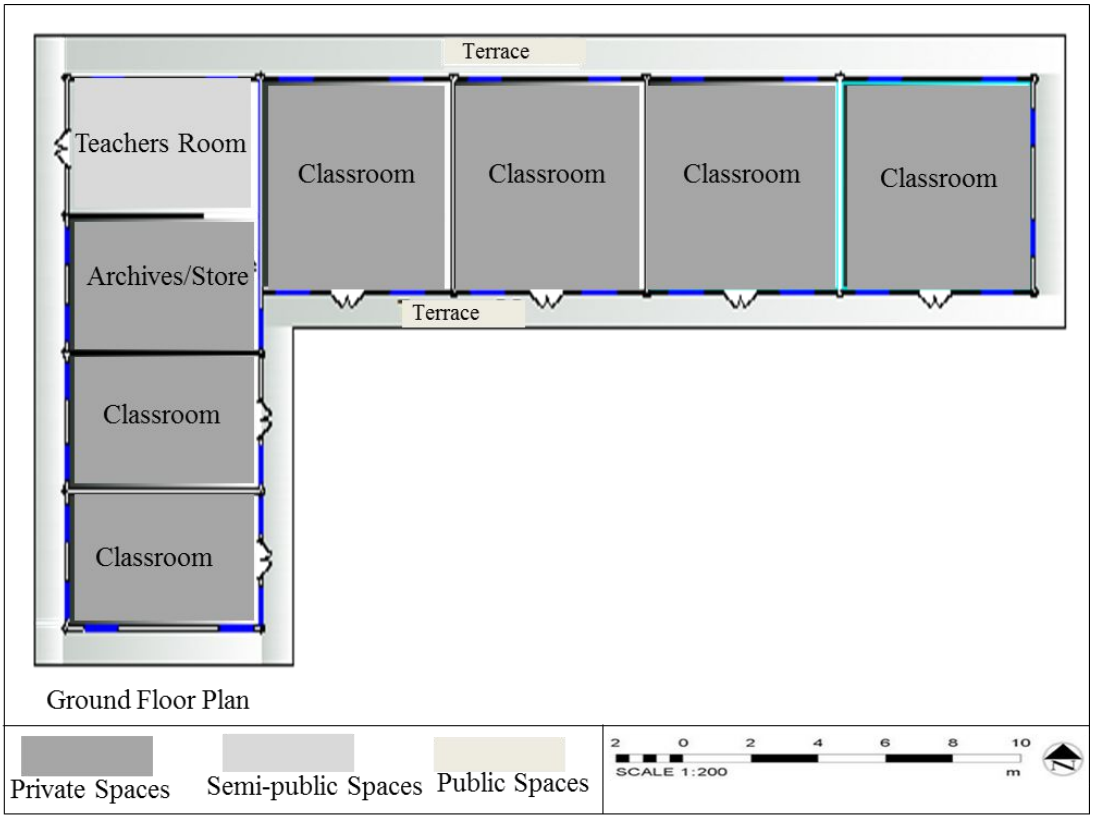


Figure 38: Spatial organization of case BCSB 4 (Duke Town Primary School)

Case BCSB 6 (Holy Child Girls Secondary School), shows the same linear space organization with terrace well defined as the semi-public space around the building. Providing a less formality for pupil's interaction among different classes/age brackets out of classrooms' teachers authority. The private spaces (classrooms), arranged on the West-side of the building and the semi-private space (teachers room) located to the East-side. Although the teachers room share a party wall, access between them is through the terrace. It is used in all Calabar cases, thereby obeying the British Colonial Architectural character. This type of terrace applies to cases BCSB [1 (Duke Town Secondary School, 4 (Duke Town Primary School and 5 (St. Patrick College) (Figure 39).

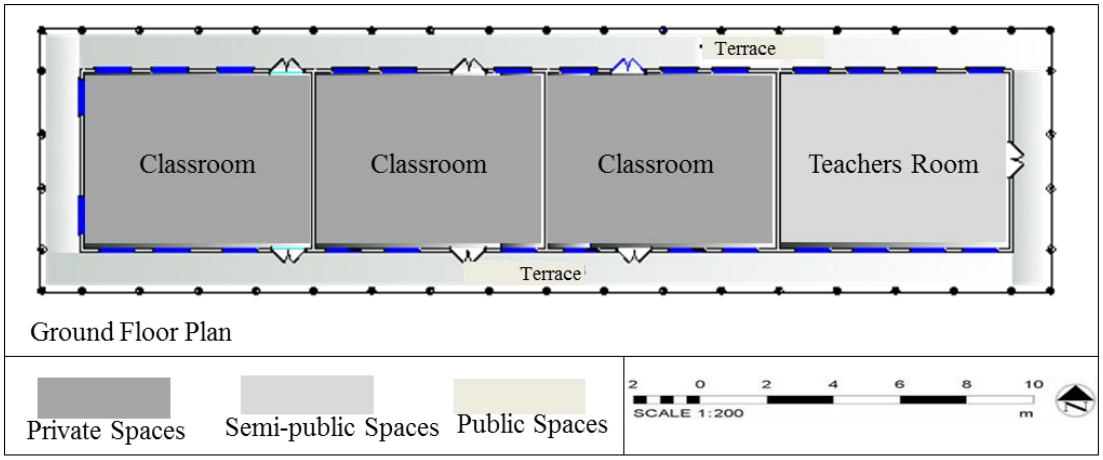


Figure 39: Spatial organization of case BCSB 6 (Holy Child Girls Secondary School)

Group 2: Cases BCSB "(2, 3 and 5)" [Hope Waddel Training Institution, Edgerly Girls Secondary School, and St. Patrick College]

The three cases in this group conditioned on two floors, and showing linear spatial organization. The terrace in this case also functions as a semi-public space to other spaces. In case BCSB 2 (Hope Waddel Training Institution), the ground floor shows the private spaces (classrooms) arranged next the terrace towards the South-side of the building. The semi-private spaces (teachers room) aligned at the North-side appearing like an afterthought to the main block. Access is also provided directly from the classrooms to the teachers room. The attachments are not ideal because of the transmission of noise from the classrooms and preventing the maximum ventilation of the classrooms. The terrace also provides the layering of the service spaces (staircase) to give access to the upper floor spaces. The terrace is repeated on the upper floor, providing transition to the private spaces (classrooms) (Figure 40).

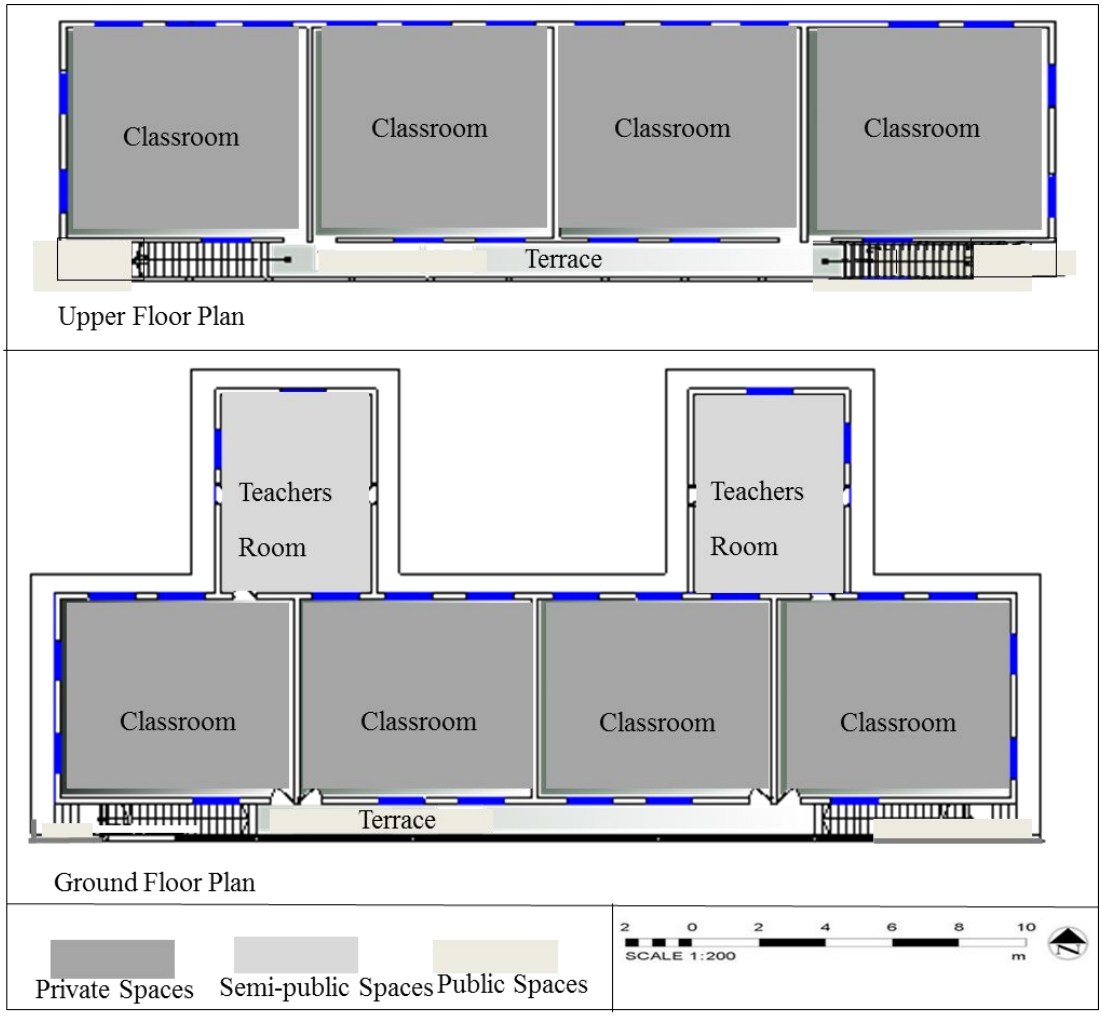


Figure 40: Spatial organization of case BCSB 2 (Hope Waddel Training Institution)

In case BCSB 3 (Edgerly Girls Secondary School), the terrace relates a similar space property as explained in Hope Waddel Secondary School. Its semi-public appearance leads to all private spaces (laboratory) both at the ground and upper floors of the building selected (Figure 41).

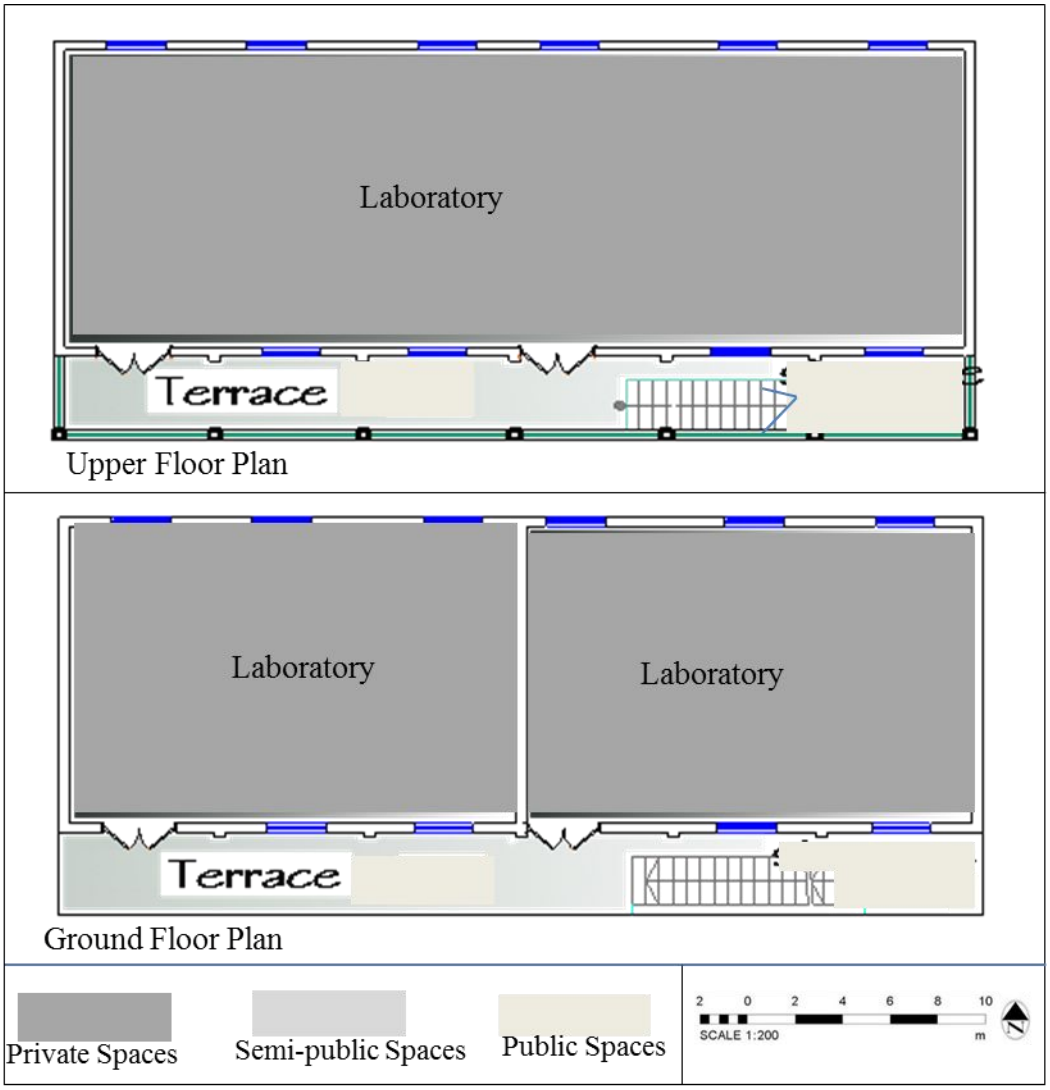


Figure 41: Spatial organization of case BCSB 3 (Edgerly Girls Secondary School)

The same spatial principle is applicable to case BCSB 5 (St. Patrick College). The terrace is semi-open and surrounding all parts of the building in the ground floor and three parts of the structure in the upper floor. The service space (staircase), centrally positioned equidistant to the private spaces (classrooms) on the ground floor situated on the East/West of the building. While in the upper floor arrangement, the classrooms are repeated on the West wing and a semi-private space (teachers room) introduced on the East-side with the addition of other private spaces (library and laboratory) with links to the terrace. The linear spatial organization is repeated (Figure 42)

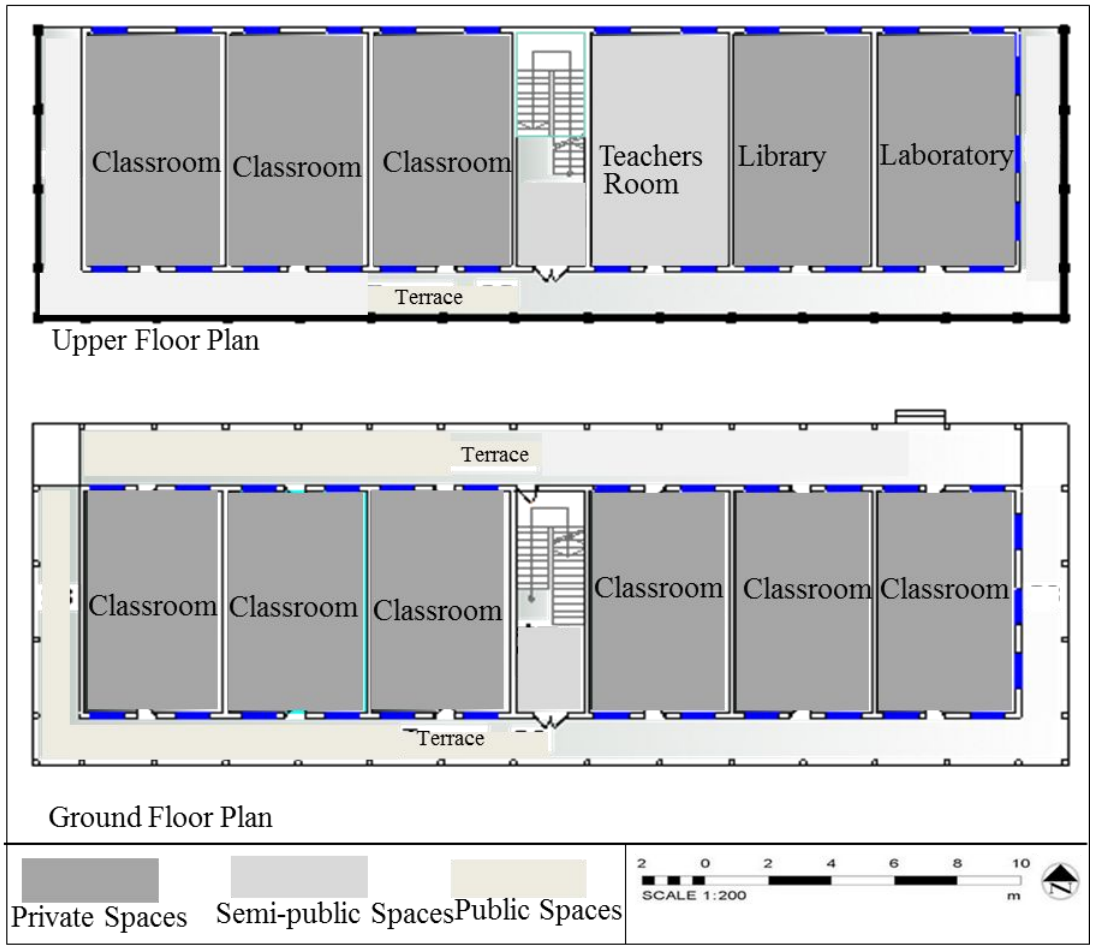


Figure 42: Spatial Organization of case BCSB 5 (St. Patrick College)

4.4.1.2 Formal Organization

It refers to all the qualities that makes an object but in this circumstance its physical actuality (Pile, 1990; Crisman, 2007). Ching (2007) conceptualized it as the process of blending architectural elements to create design principles in architectural design scheme. The sorting of cases from Calabar after sketching the simplified form identify three cases with a complete similarity of rectangular shape in the ground floors. That is cases BCSB "[1 (Duke Town Secondary School), 3 (Edgerly Girls Secondary School) and 6" (Holy Child Girls Secondary School). Due to the similar functions of spaces, repetitive layout of spaces is adhered to, especially with the classrooms. The three cases mentioned shows rectangular shape on the 2-dimensional floors (ground floor/upper floor). The 3-

dimensional form has a pitched roof as a pure shape and with roof slope that ranges from 15°-30° for all cases from Calabar (Figure 43).

The vertical view of case BCSB 1 (Duke Town Secondary School) shows a semi-open terrace surrounding the building with repetition of doors/windows fenestration having a similar shape and proportion. The classrooms, teachers room, subject master and counseling room have a rectangular shape in the 2D. Case BCSB 3 (Edgerly Girls Secondary School) indicates a semi-open front type terrace with lightweight colonnaded on the upper floor. The laboratories on the ground floor have the same rectangular shape and the one on the upper floor is maintaining the form but in a on the North/South facades. (See Appendix A: Inventory Form no BCSB 3). In case BCSB 6 (Holy Child Girls Secondary School), the four sides of the building have an arcaded semi-open terrace influenced in a neoclassical style. Therefore, giving the 3D form an artistic and 1800s architectural appearance. The classrooms/teachers rooms have the same rectangular shape in the 2D. The three cases analyzed in this section show a floor ceiling height of 3.0m (See Appendix A: Inventory Form no. BCSB 1, 3 and 6).

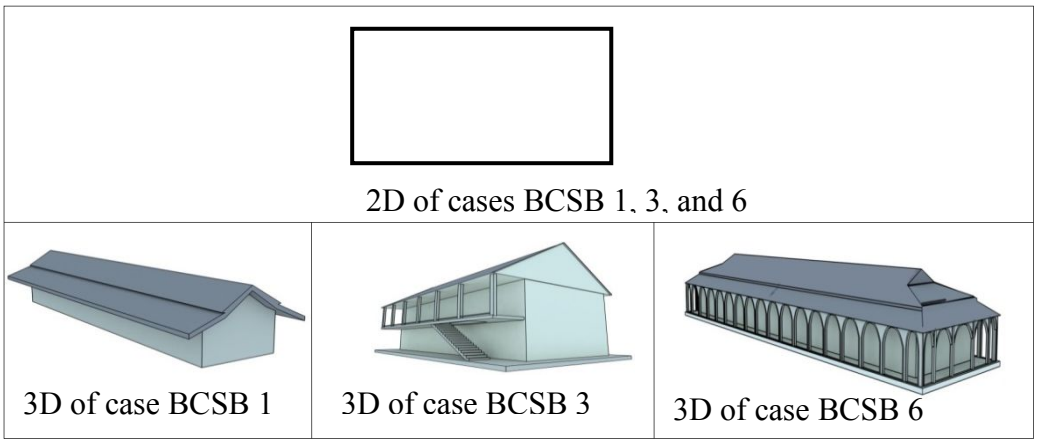


Figure 43: Formal Organization of cases [BCSB 1 (Duke Town Secondary School), 3 (Edgerly Girls Secondary School) and 6 (Holy Child Girls Secondary School)]

In case BCSB 2 (Hope Waddel Training Institution), the spaces with similar functions are given similar forms. The 2D of all classrooms uses a rectangular shape on both floors. The teachers rooms also have a rectangular shape in the 2D structure and all spaces maintain a headroom of 3.0m. It shows a rear additive of two rectangular shapes used as teachers room. The course of the terrace on the front of the building craftily arcade with walk-able semi-open pavement around the building. The relationship observed between the spatial and formal organizations of the case is that spaces with similar functions are zoned to one side or floor agreeing with the formal features of areas with similar functions having the same form Figure 44. (Check Appendix A: Inventory Form no BCSB 2).

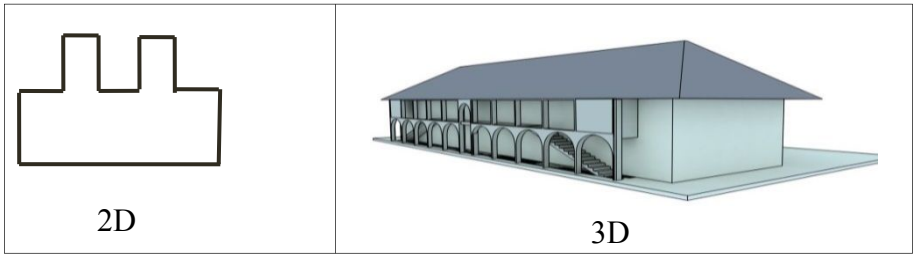


Figure 44: Formal Organization of case BCSB 2

The formal organization of case BCSB 4 (Duke Town Primary School) is having an articulated rectangularity on the 2-dimensional simplified floor arrangements. It has a hip pitch roof shape with height that dominate the other section of the superstructure in an imbalance proportion. Roof vents are incorporated to handle heat exchange in summer seasons. The classrooms on the East direction are equal, and the same square shape, the teachers room, archives/store and classrooms on the West-side has exact rectangular shape. The terrace shows a semi-public character as earlier mentioned in other cases, surrounding the building (Figure 45).

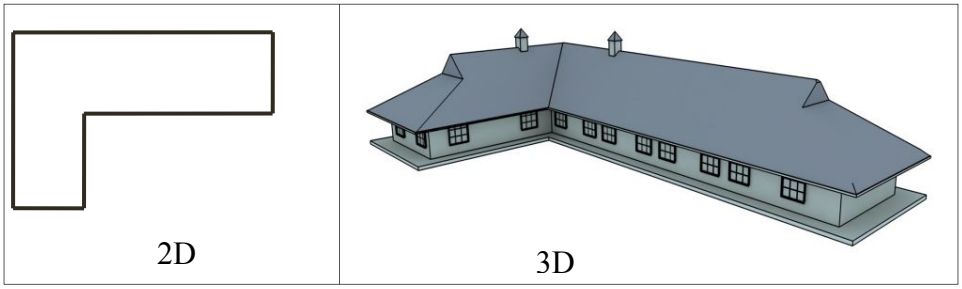


Figure 45: Formal Organization of case BCSB 4

Case BCSB 5 (St. Patrick College) compatibly maintains the rectangular shape characteristic on two floors with hip pitch roof shape. The terrace surrounds the four sides of the building on the ground floor, and three sided on the upper floor in a semi-open position. The portico, delineated with an array of square columns. The character of having the terrace around the building complies with one the design principle of British Colonial Architecture characteristics as stated in the literature section. The classrooms, library, laboratory, and teachers room clearly show the use of the rectangular shape for all spaces (Figure 46). The information from the principal of the school indicates that the rear attachment is an annex to the building. To accept that the cases under consideration stand as pure rectangular blocks support the literature that British Colonial Architecture philosophy is box-like.

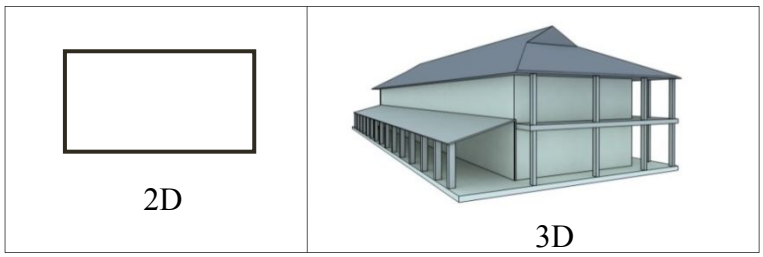
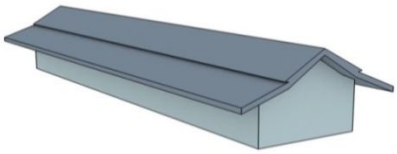
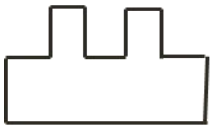
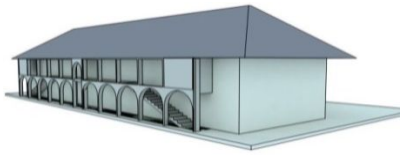
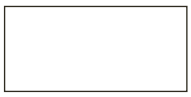
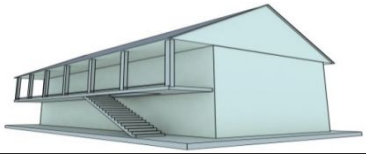
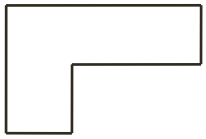
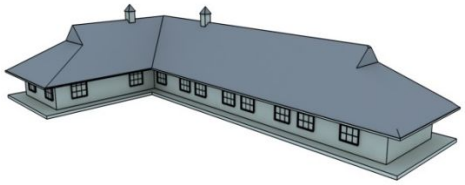
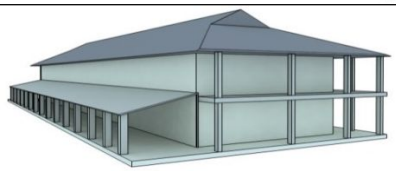
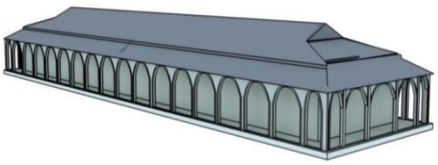


Figure 46: Formal Organization of case BCSB 5

The formal organization of all cases from Calabar in summary show a post and lintel character of repetition of arcaded, straight facade shapes and steep roof

slopes(understanding that rainfall sometimes happens all year round) that together express the distinctiveness of its 3D form. See (Table 9) for their collation.

Table 9: Formal organization summary of Calabar cases (Author, 2015)

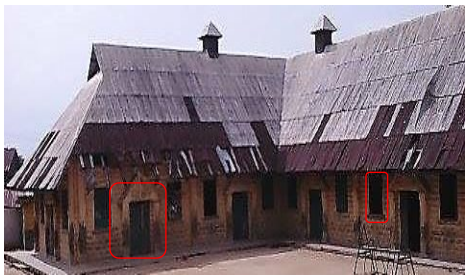
Case Name	**Formal Organization**	
	2D	**3D**
BCSB 1 **Duke Town Secondary School**		
BCSB 2 **Hope Waddel Training Institution**		
BCSB 3 **Edgerly Girls Secondary School**		
BCSB 4 **Duke Town Primary School**		
BCSB 5 **St. Patrick College**		
BCSB 6 **Holy Child Girls Secondary School**		

4.4.1.3 Architectural Elements

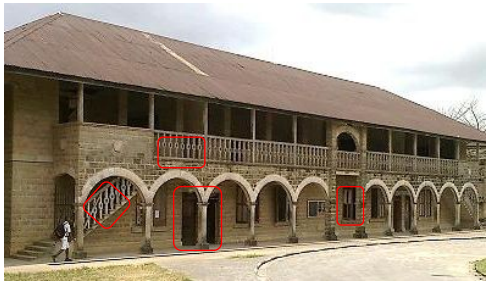
Architectural elements are enhancers to the skin of a building, informing visually in the form of different decoration themes and finishes (Curl, 1992:128). In this section, the elements that appear on the facade of the main elevation of the cases will be identified as

part of the analysis at the roof, middle and base levels. The selection of the elements is narrow on the porch, door, window, cornice, staircase and balustrades because the visual quality of the facades of the buildings selected tends to show one or more of these in common (Figure 47).

BCSB 1



BCSB 4



BCSB 2

BCSB 5

BCSB3

BCSB 6

Figure 47: Architectural elements on principal facade of Calabar cases (BCSB 1- Duke Town Secondary School, 2-Hope Waddel Training Institution, 3-Edgerly Girls Secondary School, 4-Duke Town Primary School, 5-St. Patrick College and 6-Holy Child Girls Secondary School) (All photos from author's archives)

From the analysis of the principal facade of cases selected from Calabar (BCSB 1-6), the following architectural elements are noticeable.

Doors

In case BCSB 1 (Duke Town Secondary School), the facade is made up of (5) black painted single swing hardwood wedge door with top fixed light finished with wire mesh. In case BCSB 2 (Hope Waddel Training Institution), the door is constructed of hardwood with a similar top fixed light and proportion as Duke Town Secondary School but naturally polished. The upper part of it is dressed with a plane straight stone pediment. The door in case BCSB 3 (Edgerly Girls Secondary School) is double swing red coated metal glazed door with bottom red painted metal plate which total to (3) doors. Case BCSB 4 (Duke Town Primary School) has (5) double swing deep gray hardwood panel door with top triangular motifs pediments resting on pilasters on both sided of the door. Two types of doors identified in case BCSB 5 (St. Patrick College) with the same style and material of construction and green painted. That is metal door; single swing door (12) and (2) double swing door. Case BCSB 6 (Holy Child Girls Secondary School) shows the same door properties both in dimensions, style and construction material with Edgerly Girls Secondary School but the metal is painted light gray. (See Appendix A: Inventory Form no: BCSB 1- 6).

Windows

Case BCSB 1 (Duke Town Secondary School), has (10) rectangular wooden black windows of double panels with similar description with the door of the same case described in the doors section. In case BCSB 2 (Hope Waddel Training Institution), the window has two units with four panes rectangular hardwood painted with natural color

and in twin position decorated with top/bottom straight plane pediments. Case BCSB 3 (Edgerly Girls Secondary School) has (8) two units rectangular red metal glazed casement window with four panes in each panel and having a straight bottom pediment. Case BCSB 4 (Duke Town Primary School) has (10) two units' rectangular deep gray metal window with stepped pediment having flowery motifs. The windows count in case BCSB 5 (St. Patrick College) is (24), showing 2 units of rectangular green metal casement with a jointed 3 panes for each, having top and bottom inbuilt perforation for heat exchange of the internal spaces with the external environment. The window design, size and material for case BCSB 6 (Holy Child Girls Secondary School) is similar with Edgerly Girls Secondary School. In this case, 5 rectangular pane with the metal part painted red and totals (13) in all and with a plane pediment surrounding the window. (See Appendix A: Inventory Form no: BCSB 1-6)

Staircase

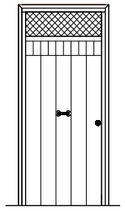
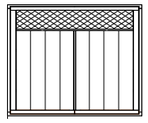
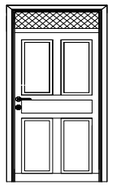
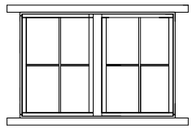
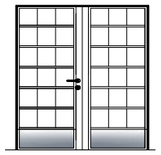
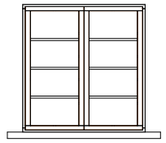
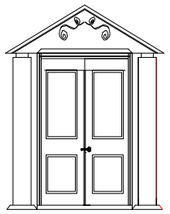
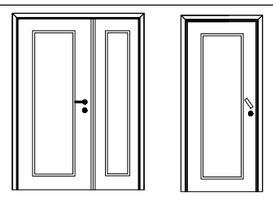
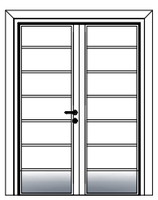
In Calabar, two cases BCSB "[2 (Hope Waddel Training Institution), and 3 (Edgerly Girls Secondary School)" show straight flight type with RC staircase design in grayish color positioned at the entrance to the building. In a direct contrast, case BCSB 5 (St.Patrick College) have internally design RC staircase in double flight painted with cream color. The staircase in case BCSB 2 is (2) while case BCSB 3 has (1). The balustrades for case BCSB 2 follows the same color with the stairs but made from stones. Case BCSB 3 balustrades obeys the color of the stairs but precast from stones. (See Appendix A: Inventory Form no: BCSB 2, 3, and 5).

Balustrades

The balustrade for case BCSB 2 (Hope Waddel Training Institution) shows an array of gray color stone with middle hexagonal component incorporated in each vertical element. It carries a top stone rail linking them with the standing columns surrounding the terrace in the upper floor. It is mounted on one side of the staircase. The balustrades for case BCSB 3 (Edgerly Girls Secondary School) completed from gray iron galvanized pipes (3 bars) hooked between RC short columns on the staircase area and light weight columns on the upper floor terrace. The balustrade for case BCSB 5 (St. Patrick College) is made up of vertical stone moldings with central stone multi-circular motifs in cream color and a top stone rail in green color arranged between the columns on the upper floor terrace. (See Appendix A: Inventory Form no: BCSB 2, 3, and 5).

A summary of all the element selected from Calabar cases are shown in Table 10.

Table 10 : Architectural elements of Calabar cases

Cases	Photo	Porch	Doors	Windows	Cornice	Staircase/ Balustrade
BCSB 1-**Duke Town Secondary School**						
BCSB 2-**Hope Waddel Training Institution**						
BCSB 3-**Edgerly Girls Secondary School**						
BCSB 4-**Duke Town Primary School**						
BCSB 5-**St. Patrick College**						
BCSB 6-**Holy Child Girls Secondary School**						

4.4.1.4 Functional Assessment

It is obvious that school buildings perform multifunction, ranging from learning to the development of individuals structured around curricular and extracurricular activities. Calabar cases function within the mentioned scope and the assessment conducted explain that the cases are designed and built in a linear spatial organization. They also display simple box phenomena of the British Colonial Architecture. In the structural system assessment, certain majors are employed to respond to the environmental conditions of Calabar setting for an efficient performance of the buildings. The WCs in all Calabar cases are located away from the building selected. The following spaces are practically significant in the cases studied.

- Terrace
- Study spaces
- Offices
- Auxiliary spaces

Terrace

The terrace performs unique duties in all the cases from Calabar especially as the compass for accessing other spaces. It also creates a feeling of openness of the cases and place for interaction outside the study rooms' tension. Two types of terrace "(Type 1 and Type 2)" identified, and both have semi-open features Figure 48.

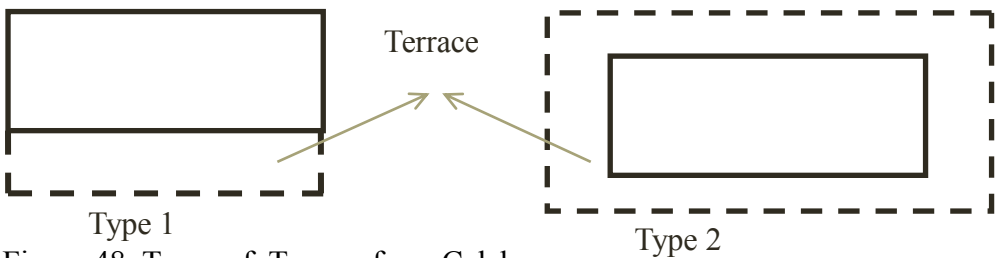


Figure 48: Types of Terrace from Calabar cases

In each type, additional characters like an arcade or straight beams supported by columns are observed.

- ‘Type 1’ relays front approach at the front of the building facing South direction. It provides for layering of service facilities within it. Specially, linking users to the spaces on the top floor. The cases with this terrace type are BCSB “[2 and 3 (Hope Waddel Training Institution and Edgerly Girls Secondary School)]” Figure 49.

BCSB 2 BCSB 3

Figure 49: Calabar cases with ‘Type 1’ Terrace (Hope Waddel Institution & Edgerly Girls Secondary School)

- ‘Type 2’ conveys a sense of surrounding the building, providing ease of entering each space without regimented measures from outside to inside. The cases explained, are BCSB “[1, 4, 5 and 6 (Duke Town Secondary School, Duke Town Primary School, St. Patrick College and Holy Child Girls Secondary School]” Figure 50.



BCSB 2 BCSB 5 BCSB 6

Figure 50: Calabar cases with 'Type 2' Terrace (Duke Town Primary School, St. Patrick College & Holy Child Girls Secondary School)

Study Spaces

The study areas provide the most demanding spaces of the schools because the primary activities of the school leverage on it. The pupils spent more time in such sections of the building than any other parts. Without a doubt, it occupies the largest proportion of the buildings. The study spaces are made up of classrooms, laboratories, workshops, library, computer rooms and music rooms as it relates the cases in the two contexts examined. They form the central part of the buildings.

The classroom windows of case BCSB 1 (Duke Town Secondary School) are wooden and painted black with a total of (4) per classroom. The windows admit enough day lighting and correctly positioned in opposite direction North-South allowing cross ventilation. Case BCSB 2 (Hope Waddel Training Institution) classroom has (5) wooden windows painted black. The classrooms on the ground floor with the attachment of the teachers room tends to hamper the free flow of air and admission of natural lighting. The upper floor arrangement differs because the classrooms are semi-open in response to summer classrooms' Temperature conditions. In Case BCSB 4 (Duke Town Primary School), the windows are (4) made of steel plate and coated with deep gray paint. The classrooms facing South-North directions receive proper orientation treatment than the ones that faces East-West directions. Case 5 (St. Patrick College) has (4) green painted steel windows in all classrooms. The classrooms are cross ventilated and adequately

illuminated on the North-South direction. In Case 6 (Holy Child Secondary School), the windows are metal glazed in a light-gray paint with a total of (6) per classroom. The window settings are positioned on South and North facades allow for daylight and ventilation of the classrooms (see Figure 37-38, and 42). Sample of study spaces are shown in (Figure 51).

Figure 51: Sample Study spaces from Calabar

Offices

The offices handle the duty of coordinating the activities of the schools. The functions entail administration, teaching, counseling and discipline. The offices from the findings vary depending on the type of school (head of school, assistant head of school, teachers' room, secretary, counseling room and subject master). From the cases analyzed, the teachers' room stands an essential office. It appearance holistically qualifies as a shared space for staff. The window sizes of the offices identified have uniform dimensions with the classrooms but shows slight variations in quantities. (See Figure 52 for sample office).

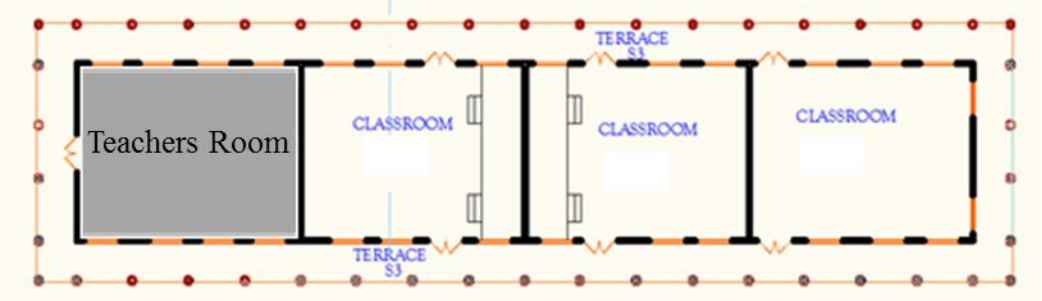


Figure 52: Sample Office layout from Calabar cases (BCSB 6-Holy Child Girls Secondary School)

In case BCSB 1 (Duke Town Secondary School), the teachers room and subject master offices show (2) wooden windows painted black for each, facing South and North walls. It allows enough lighting and cross ventilation of the offices. Meanwhile, the counseling room shows a similar character but with additional (2) windows of the same character as explained repeated, and facing the East wall to create symmetry with the West facade. All the offices examined have (1) wooden door painted black, opening to both South and North facades into the semi-open terrace. (See Appendix A: Inventory Form no BCSB 1).

Case BCSB 2 (Hope Waddel Training Institution, has two teachers rooms (One standing as a mirror of the other), implying that every explanation accorded to one is a replicate of the other. It shows the same window qualities with the classrooms mentioned previously but facing North, East and South walls. The South wall window opens into a classroom, not ideal for the functioning of the office especially when picturing the noise impact. The daylight admitted is not satisfying the office with an area of (51.0m^2) and a ceiling height of (3.0m). In each office, (1) wooden door in natural gloss polish opens to the East and West walls. (See Appendix A: Inventory Form no BCSB 2). Case BCSB 4 (Duke Town Primary School) has teachers room with (2) metal windows painted with deep gray paint opening to the North wall. It is poorly oriented even though enough daylight admitted. The functioning of the office adopts a rigid window arrangement that does not allow

cross ventilation of the office. The office has one wooden door in deep gray paint opening in the direction of the West wall into the semi-open terrace and linking the archives/store with a semi-open doorway. (See Appendix A: Inventory Form no BCSB 4).

In case BCSB 5 (St. Patrick College), the teachers room windows are (4) in green painted steel with (2) each facing the South and North walls. The daylight admitted is not enough because of the lengthy nature of the office. A green steel plate door opens on the South wall to the terrace on the upper floor of the building. (See Appendix A: Inventory Form no BCSB 5). Case BCSB 6 (Holy Child Girls Secondary School) shows (8) light gray metal glazed windows of which (4) of each faces North and South walls. The windows allow enough day lighting and proper air flow to and fro the office. The office shows (1) light gray metal glazed door opening on the East wall to the terrace. The summary of the offices identified in Calabar cases are shown in (Table 11).

Table 11: Summary of offices for Calabar cases (BCSB 1-6)

Cases	Head of School	Assist.Head of School	Teachers Room	Secretary	Counseling Room	Subject Master
BCSB1			●		●	●
BCSB2			●			
BCSB3						
BCSB4			●			
BCSB5			●			
BCSB6			●			

Auxiliary Spaces

The auxiliary spaces function as supportive spaces to the buildings studied. They provide linkages to and fro leading areas, storage of valuables/intangibles, refreshment, and

easement. They include conveniences, staircases, lobbies, kitchenettes, canteens, stores and archives. (See Appendix A: Inventory Form no: BCSB 2, 3, 4 and 5).

The staircase for case BCSB 2 (Hope Waddel Training Institution) is straight flight layered in the Terrace on both sides of East-West directions of the building. The construction of the stairs executed is a straight flight with RC. The users access the top floor through it without obstructing the functioning of the ground floor spaces. (See Appendix A: Inventory Form no: BCSB 2). The staircase for case BCSB 3 (Edgerly Girls Secondary School) is similar to case BCSB 2 in type and construction material. Case 5 (St. Patrick College) staircases is double flight and RC and positioned internally and centrally. (See Appendix A: Inventory Form no: BCSB 5). Case BCSB 4 (Duke Town Primary School) has the store and archives organized in one space with (2) deep gray painted metal windows facing the West wall and (1) on the East wall and a semi-open door linking the teachers room. The provided space is capable of providing storage of pupils' documents and the school stationaries. A summary of the auxiliary spaces for precise identification as investigated is provided (See Table 12).

Table 12: Auxiliary Spaces for Calabar cases (BCSB 1-6)

Cases	**Auxiliary Spaces**						
	Conveniences	Staircase	Lobby	Kitchen	Canteen	Store	Archive
BCSB 1							
BCSB 2		●					
BCSB 3		●					
BCSB 4						●	●
BCSB 5		●					
BCSB 6							

4.4.1.5 Building Materials and Structural System

The materials of a building relates strongly with its structural system especially, for their role in determining the physical properties of the building. In this section, the materials and structural systems used for construction of the School buildings studied will be analyzed on three basic components wall, floor and roof.

Materials

The materials used for constructing a building are vital especially as they constitute a unit of identifying the period of construction, regionalism, response to climate and the type of architecture (traditional or modern). The local materials in Nigeria during British Colonial Period include wood, stones, sand, and thatch. From the physical analysis conducted from Calabar cases (BCSB 1-6), the following materials are identified. The materials widely used in the construction of the school buildings of British Colonial Period in Calabar falls into stones, cement sand screed, wood, concrete, metal corrugated roofing sheets in response to the three listed components.

For wall, cobblestones are used for cases BCSB "[2 (Hope Waddel Training Institution and 4 (Duke Town Primary School)]", the stones in the two cases identified functions as external walls. While cement sand screed (CSS) blocks are used for cases BCSB "[1 (Duke Town Secondary School, 3 (Edgerly Girls Secondary School, 5 (St. Patrick College, and 6 (Holy Child Girls Secondary School)]"as both external/internal wall partitioning. Iron corrugated is used as part of external walling material for Duke Town Secondary School and as roof cover for all the cases analyzed.

Wood suitably used in the construction of upper floor decking in Hope Waddel Training Institution and St. Patrick College. Concrete and cement sand screed are constituted as floor materials for all cases in Calabar. (See Appendix A: Inventory Form no. 1-6).

Structural System

Already, the fact remains that the stability and value of a building are dependent on it structural system. Without which, all other intentions of the building will stand obsolete in the environment. A careful evaluation of the measured drawings produced of the cases and the photographs taken, undoubtedly consolidate the load bearing structure of the cases selected.

Wall

The load bearing wall system of the cases are slender and sorted into three systems constructed of cement sand screed blocks (Edgerly Girls Secondary School and Holy Child Girls Secondary School), cobblestones (Duke Town Primary School) and composite. The composite shows three minor systems of RC with cobblestones (Hope Waddel Training Institution), RC with sand screed blocks (St. Patrick College) and CSS blocks with iron corrugated sheets (Duke Town Secondary School) Figure 52.

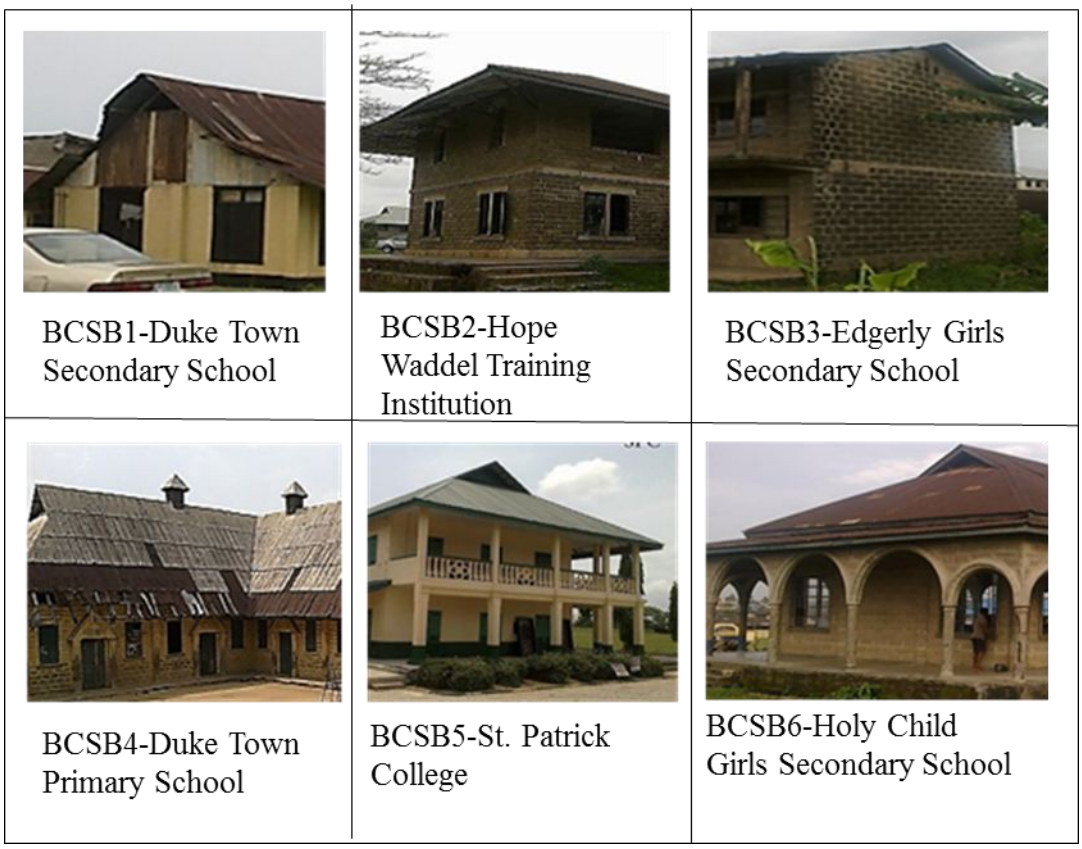


Figure 53: Structural character of Calabar cases (BCSB 1-6)

Floor

The floor systems identified from the cases under consideration are divided into two classes. The “class 1” constructed from a concrete slab with cement sand screed flooring (all cases show this type in the ground floors with Edgerly Girls Secondary School maintaining it on the upper floor). (See Figure 53 for sample). The “class 2” shows the features of RC with wooden floor boards on the upper floors (Hope Waddel Training Institution and St. Patrick College) Figure 54.


BCSB 3 BCSB 6

Figure 54: "Class 1" floor type from Calabar cases (Edgerly Girls Secondary School and Holy Child Girls Secondary School)

BCSB 2

Figure 55: "Class 2" floor type from Calabar cases (Hope Waddel training Institution)

Roof

The roofing system for all the cases evaluated fit into pitched roof, relaying varying forms of gambrel (Duke Town Secondary School), hip (Hope Waddel training Institution, Duke Town Primary School, St. Patrick College and Holy Child Girls Secondary School), gable (Edgerly Girls Secondary School) and a lean-to (St. Patrick College) Figure 55. Furthermore, a general property of the roof is rooted on the steepness of its slope ranging from approximately (15^o - 30^o). The structure of the trusses convey two systems, the one constructed with steel (Hope Waddel training Institution) and the other from timber (Duke Town Secondary Secondary School,

Edgerly Girls Secondary School, Duke Town Primary School, St. Patrick College and Holy Child Girls Secondary School) Figure 56.

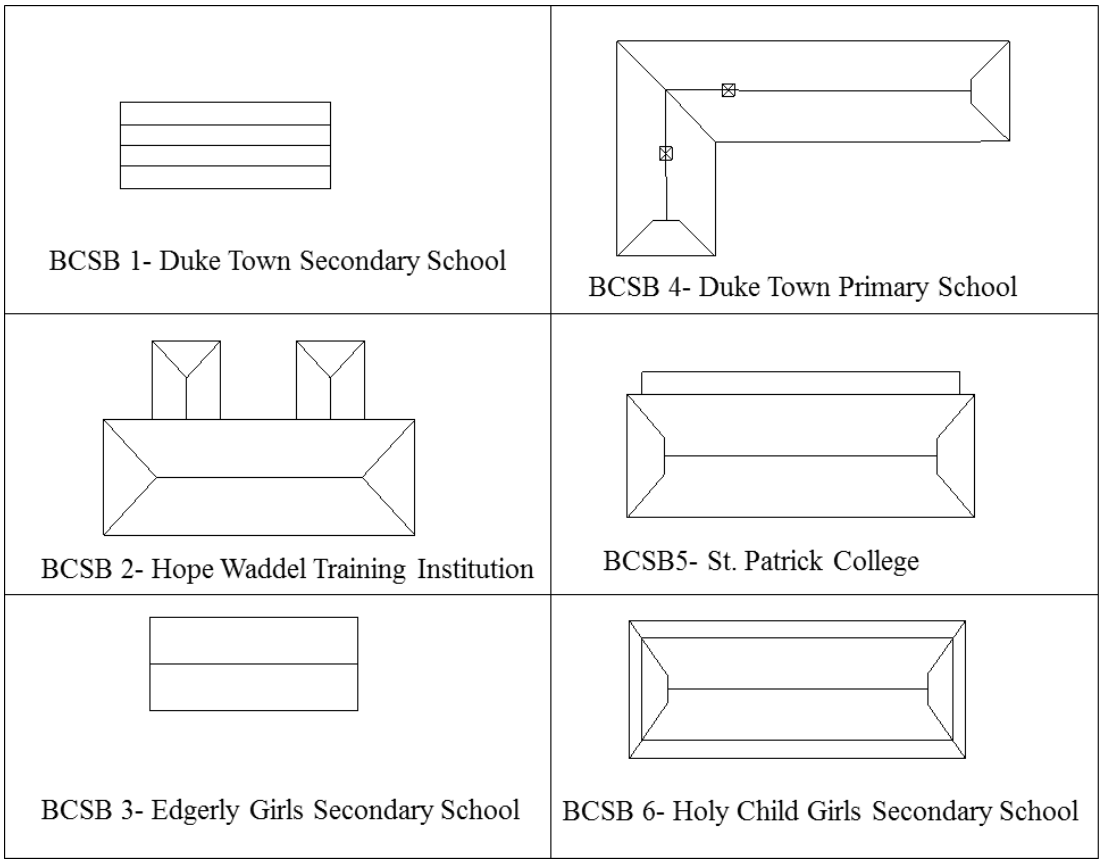


Figure 56: Pitched roof system from Calabar cases (BCSB 1-6)

Figure 57: Steel and timber roof systems from Calabar cases (Hope Waddel Training Institution and Edgerly Girls Secondary School)

4.5 Analysis of British Colonial School Buildings in Famagusta

The analysis of the cases from Famagusta follows the same format as explained in Calabar. The process proceeds with the architectural assessments of the eight selected cases as represented in (Appendix A).

4.5.1 Architectural Assessment

The architectural assessment of the eight cases from Famagusta is likewise executed through the under listed parameters spatial organization, formal organization, architectural elements, functional assessment, building elements and structural system of the school buildings selected.

4.5.1.1 Spatial Organization

In each case, the floor plans are reproduced as measured drawings. The spatial simplification for the cells connections of the spaces will assist in the definition of the type of spatial organization that is employed. The spaces' names are codified as given in "(Table 8)" previously to enable the efficient scalability of gathered information.

Case BCSB 7 (Endustri Meslek Lisesi)

The spatial organization in the case is evolved from the basement plan, the floor plan, and the upper floor plan. The basement has two workshops which are private spaces linked to the workshop's master office as a semi-private space. The basement does not have internal access connections with other floors. It is placed half way from the line of the reception to the West direction of the building. The spatial organization type for the case is linear and axial organization. All spaces with similar functions possess same spatial qualities. The spaces "(porch , terrace, vice principal, secretary, and store)" are centrally connected to the reception. Meanwhile, the porch is a public space; but the terrace, vice principal and secretary are semi-private while the store falls under private

spaces. Concurrently, the terrace carries three clusters. The (floor plan 2) having "(reception, teachers room, archives, kitchenette, conveniences and staircase)", "(reception, secretary, workshops, conveniences and staircase)" and the upper floor accommodates "(laboratory and subject master)". The teachers room, kitchenette, conveniences and staircases are semi-private spaces in the space organization while "(archives and workshops)" are private spaces. The terrace, serving as the highest area for distribution of users to other compartments symmetrically situated at the North direction, showing the features of a rear terrace approach. The head office is a semi-private space functioning as the head of administration linked to reception through secretary (intermediary space) because of the operational relationship between them. The connection to the upper floor is through staircases positioned at symmetry on the North wing of the building, acting as the service space to all the spaces in the upper floor. The repetition of terrace in the top floor gives room for easy accessibility to the laboratories and subject master spaces. The porch on the South axis remains the central entrance point to the building though currently complemented by the terraces at the rear side (North direction) of the structure (Figure 57).

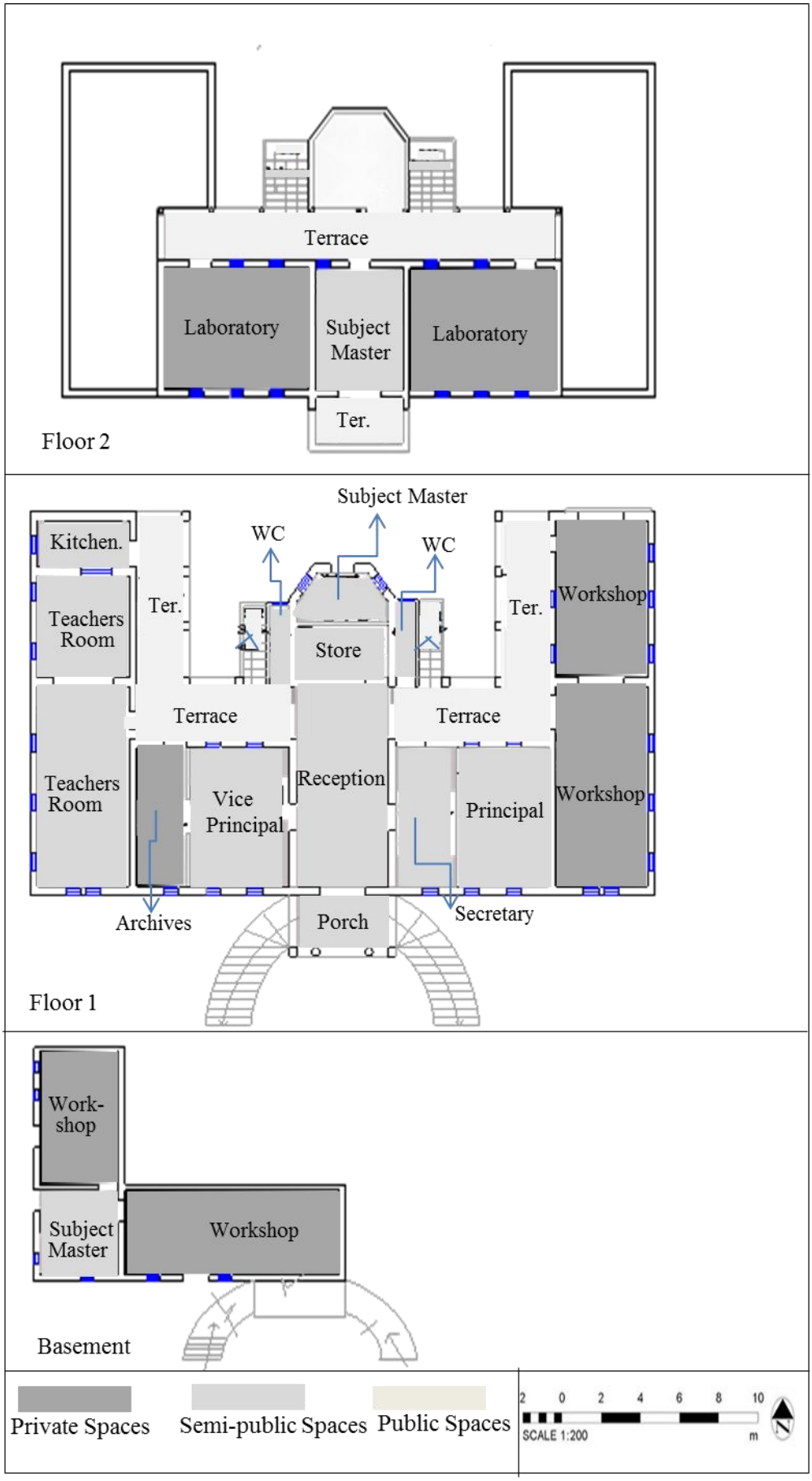


Figure 58: Spatial organization of case BCSB 7(**Endustri Meslek Lisesi)**

Case BCSB 8 (Gazi ilkokulu)

The spatial organization of Gazi ilkokulu is linear organization, users enter at one point of the building (porch) and can exit at the other end (terrace). Although the spatial weight differs from Endustri Meslek Lisesi, its arrangement of spaces follows a similar pattern when measuring the placement of entrance porch, reception and terrace. The reception and the terrace received alterations works to take up the secretary office and teachers room. Coherently, to serve the requirements of the building in the present time (According to the English Teacher of the school, the terrace received modification when TRNC government took over the school). The secretary office, is introduced into the terrace as indicated in the floor plan. Therefore, the terrace at the rear (North direction) of the building performs the ingress and egress functions of the building as both public/semi-private spaces. The spatial behavior of the classrooms located on the East direction of the building mirrors to the West direction of the building with the same spatial characteristics. The space character represented falls into the style were all spaces with similar functions are allotted the same spatial properties (Figure 59).

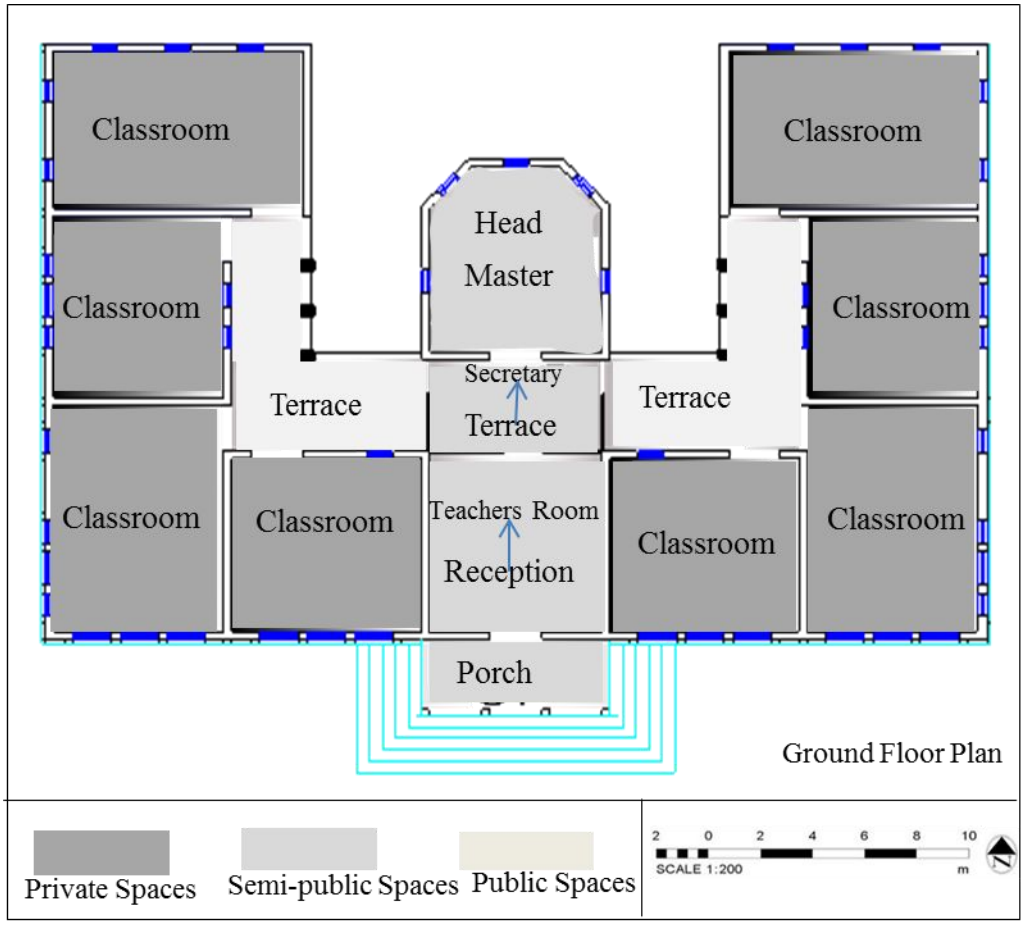


Figure 59: Spatial organization of case BCSB 8 **(Gazi ilkokulu)**

Case BCSB 9 (Canbulat Özgürlük Ortaokulu)

The spatial arrangement for Canbulat Özgürlük Ortaokulu is linear and axial, accommodated on two floors with the same type of spatial organization. The spatial groupings follow thus: Pubic area comprises the porch; Semi-private spaces are (reception, terrace, principal office, and vice principal office, secretary, teachers room, subject master, conference room, kitchenette, conveniences, staircases) and the private spaces include (classroom, music room, laboratories, library, store and lobby). The semi-private spaces (principal office, vice principal office, teacher room, secretary and subject master) are zoned to the East front section of the building connected to reception. The link between this section with the private spaces is through the terraces and service areas (staircases/lobbies). The terrace opens to the South facade as a semi-

public one in a linear arrangement to the classrooms, opening directly to it and also surrounds the courtyards as a platform for gathering before and after class periods. The spatial similarity of this case with the recently discussed ones is the tendency of repetition of spaces with similar functions. However, other parameters of spatial consideration differ thoroughly, (see Figure 60-61).

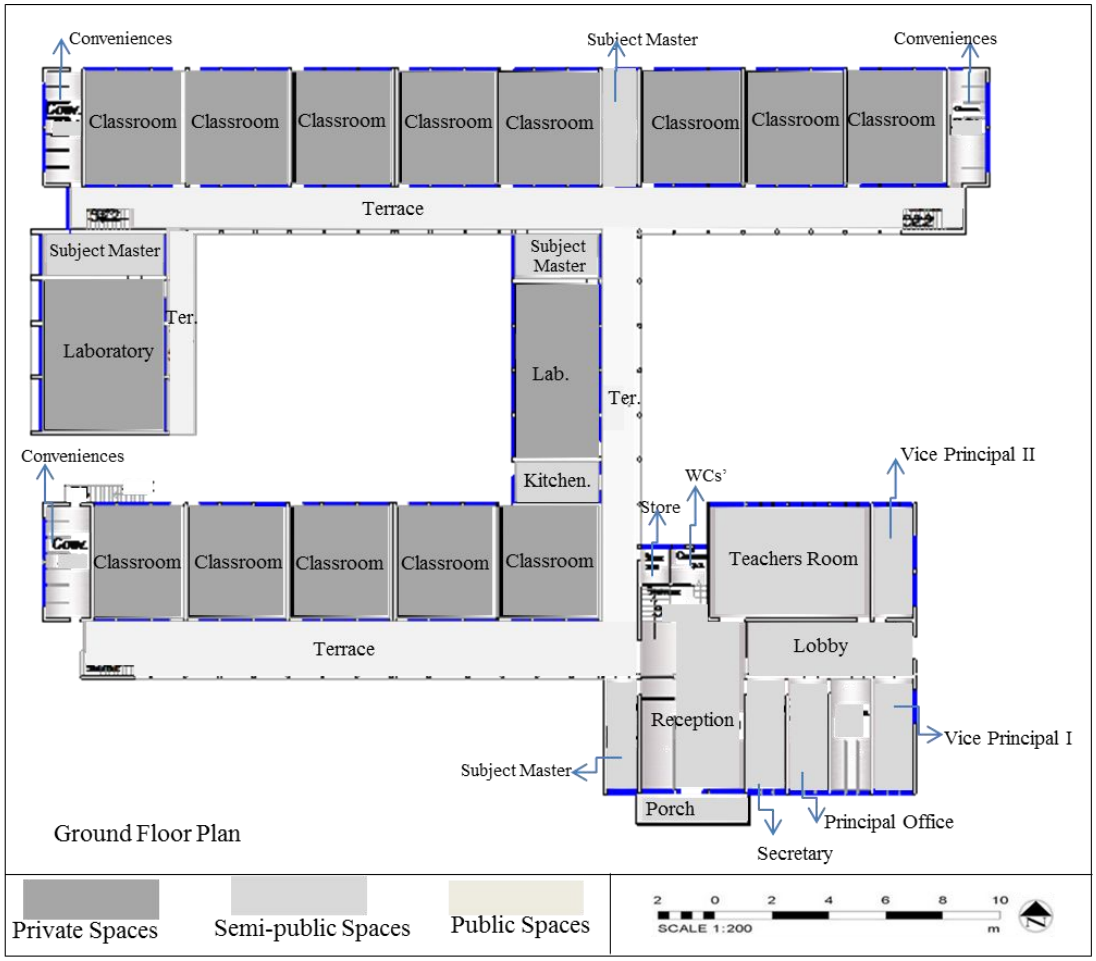


Figure 60: Spatial organization of BCSB 9 (**Canbulat Özgürlük Ortaokulu**)

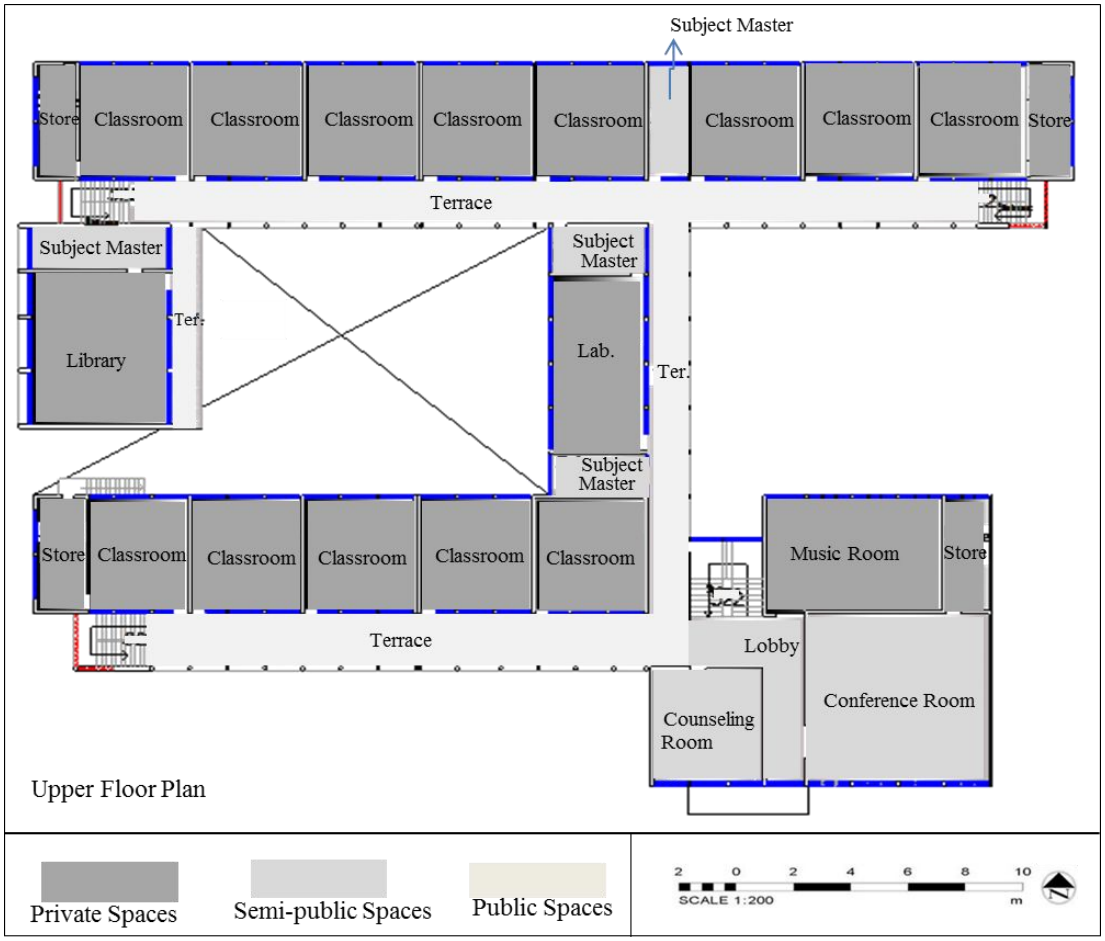


Figure 61: Spatial organization of case (BCSB 9)[1]

Case BCSB 10 (Polatpasa ilkokulu)

Polatpasa ilkokulu shows a linear type of spatial organization with two discrete units. The South and North-East directions of the building link by a central unit comprising reception now (teachers room) and porch modified to (archives). The South direction maintains a section of the private spaces (classroom and store), and a component of the semi-public spaces terrace. In the North-east direction the slanting block embodies numbers of private space (classroom) and semi-private spaces (head master, assistant head master, secretary and lobby). The terrace shows a courtyard property as seen in Canbulat Özgürlük Ortaokulu and performs the same functions of acting as waiting areas for pupils' guidance who come at dismissal time to pick them. The case also

agrees with the uniformity of spaces with similar functions depicting same spatial qualities (Figure 62).

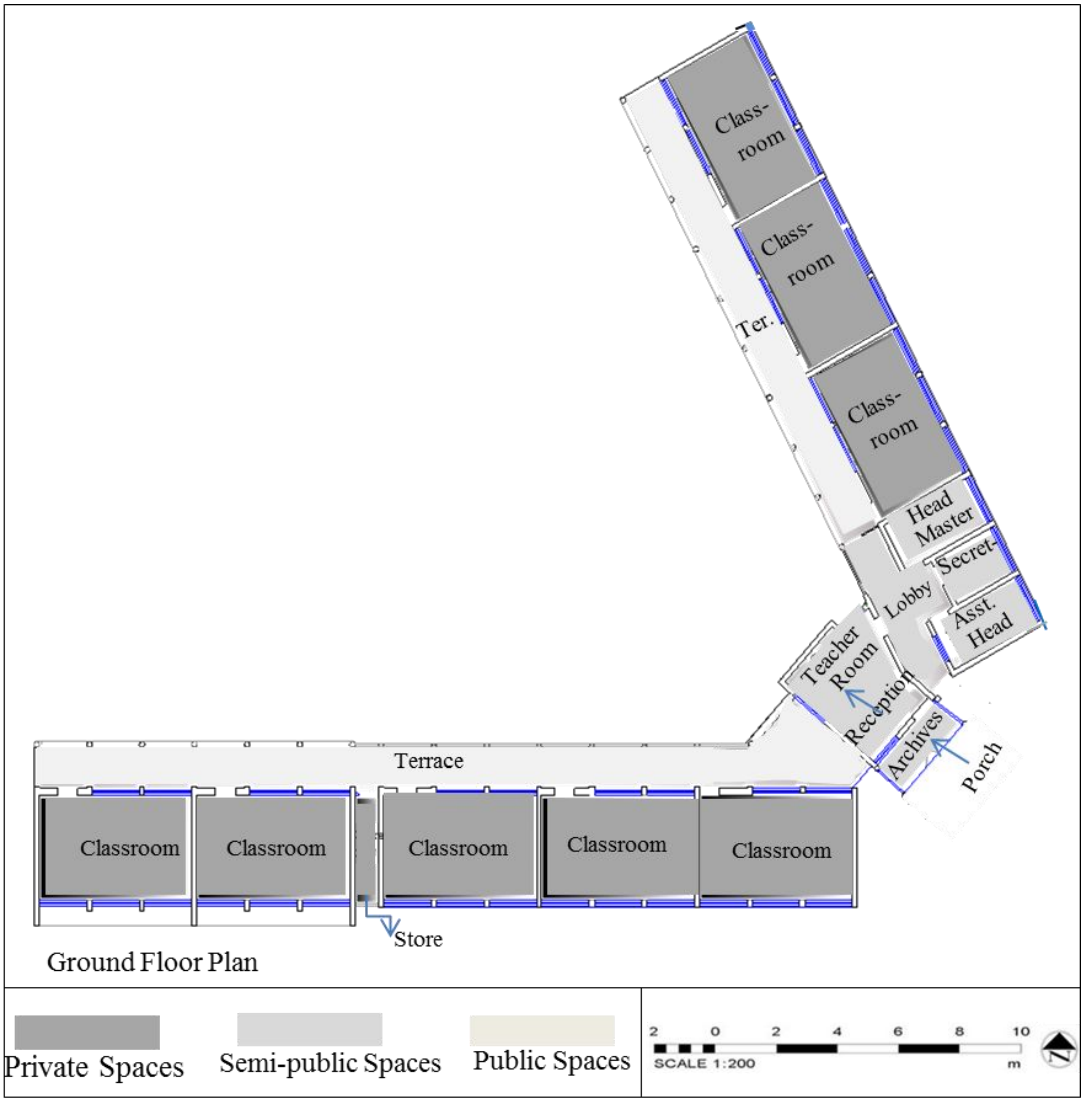


Figure 62: Spatial organization of case BCSB 10 **(Polatpasa ilkokulu)**

Case BCSB 11 (Canbulat ilkokulu)

The spatial organization for Canbulat ilkokulu is linear and centralized organization. The private spaces (classrooms) are organized linearly to the terrace which is semi-public space on both the ground and upper floors. The semi-private spaces (subject master and kitchenette and reception), connected to the porch firmly embedded with

the terrace on the ground floor. The semi-private spaces include "(head master, teachers room, store and conveniences)" are arranged in the East region of the building centrally to the reception on a single floor volume. The staircase hangs on the South facade as an afterthought servicing for the introduction of users to and fro the upper floor. All classrooms have the same space identity. The terrace type employed indicates a front approach which is partly related to that of Canbulat Özgürlük Ortaokulu but in direct compliance with some instances already treated on Calabar spatial organization for (Hope Waddel Training Institution and Edgerly Girls Secondary School) (Figure 63).

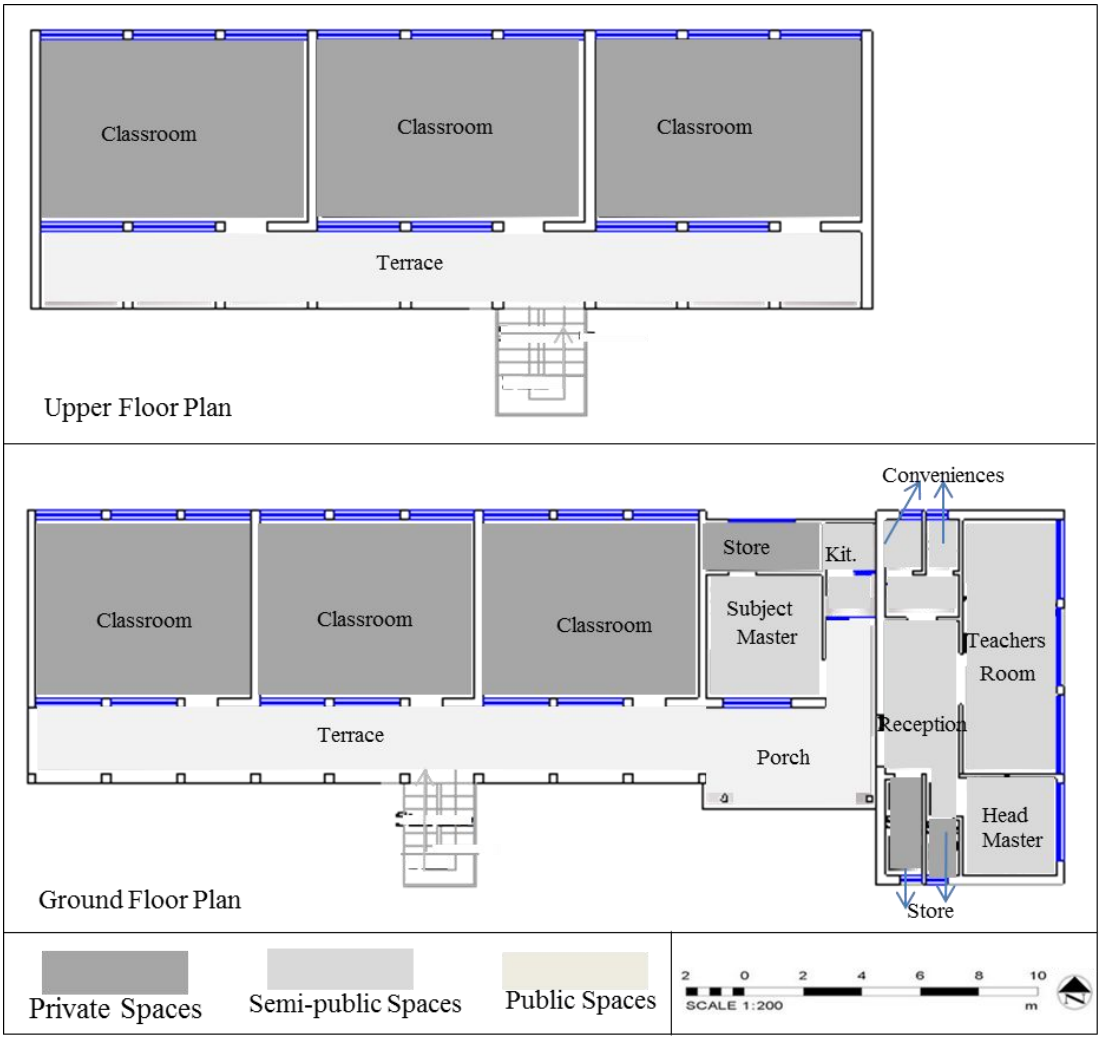


Figure 63: Spatial organization case BCSB 11 **(Canbulat ilkokulu)**

Case BCSB 12 (Alasya ilkokulu)

The spatial layout for Alasya ilkokulu is linear and axial organization. The private spaces are composed of (classroom and music room), situated at the North area connected to the semi-private "(head master office, assistant head master office, teachers room, secretary and conference room)" axially to the terrace.The terrace frontally and perpendicularly bisect the three private units. The semi-private spaces follow suite towards the South direction axially linked to the private areas by the terrace. The public space (porch) strategically placed defined the primary entrance of the building in the South wing. The terrace shows a courtyard character for gathering and distribution to various sections of the building to the East and West directions. The space property of repetition of classroom/offices recalls a similar spatiality composition with earlier discussed cases (Figure 64).

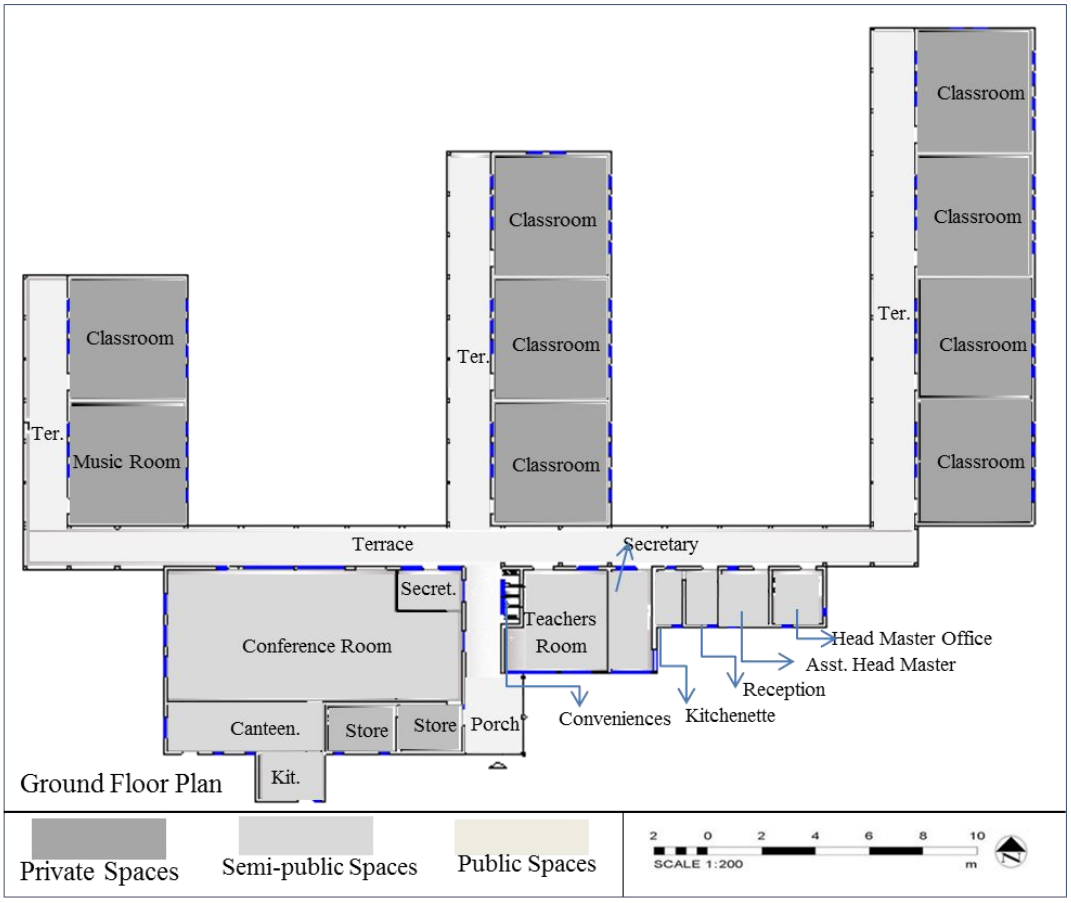


Figure 64: Spatial organization of case BCSB 12 **(Alasya ilkokulu)**

Case BCSB 13 (Gazi Mağusa Meslek Lisesi)

The spatial array for Gazi Mağusa Meslek Lisesi is linear and axial organization. A Large percentage of the private spaces (classroom, computer room and store) are arranged on the upper floor. Linearly placed opposite each other along the lobby and semi-private space (teachers room) is added to the North-West area of the building. The lobby also links to a transition space that connects an annex recently constructed. The semi-private spaces consist of (principal office, vice principal, secretary and archives), concentrated in a linear and axial manner on the ground floor immediately after the terrace to the South view with exits at the East, and West/South views. The (teachers room, kitchenette and convenience) on the South-West area of the building are in a semi-private spaces' arrangement. The porch stands out almost mid-point on the South

elevation defining the primary entrance to the building and at the North egress point. The service spaces is composed of (canteen, conveniences and staircase) are assembled in the North zone, as semi-private spaces and connected to the lobby and linking to the backyard open spaces. The terrace also has a front quality that is a mirror of Canbulat ilkokulu type. The offices linked on the right and left sides of the reception shows internal connections between the secretaries' and the principals' offices. The archives firmly connected through the principal office with the principal, vice principal and secretary offices linked to the lobby in a linear arrangement. The workshop is a private space related to other areas through the lobbies. It also substantial to remark that the case also a response to the repetitive character of space with similar functions displaying exact spatial weight/meanings (classrooms and offices) (Figure 65).

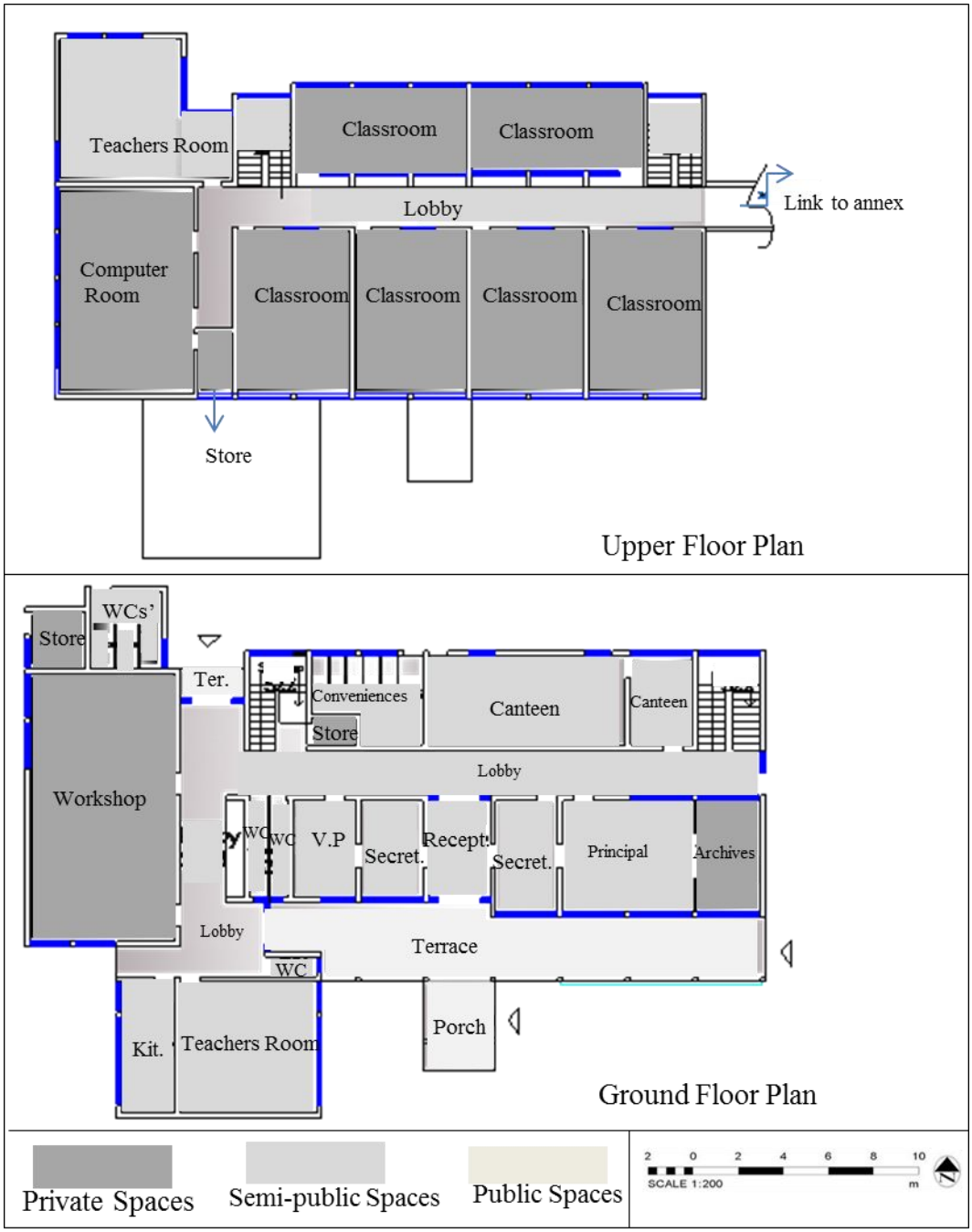


Figure 65: Spatial organization case BCSB 13 **(Gazi Mağusa Meslek Lisesi)**

Case BCSB 14 (Sehit Huseyin Akil ilkokulu)

The spatial organization for Sehit Huseyin Akil ilkokulu is linear structure, all the spaces"(head master office, teachers room, secretary and classrooms)", assembled sequentially to the terrace. The case shows a simple but compact spatial arrangement between the semi-public terrace with the semi-private and private spaces. The practice of

space repetition carefully adhered to and the terrace also relates the front traits tendency (Figure 66).

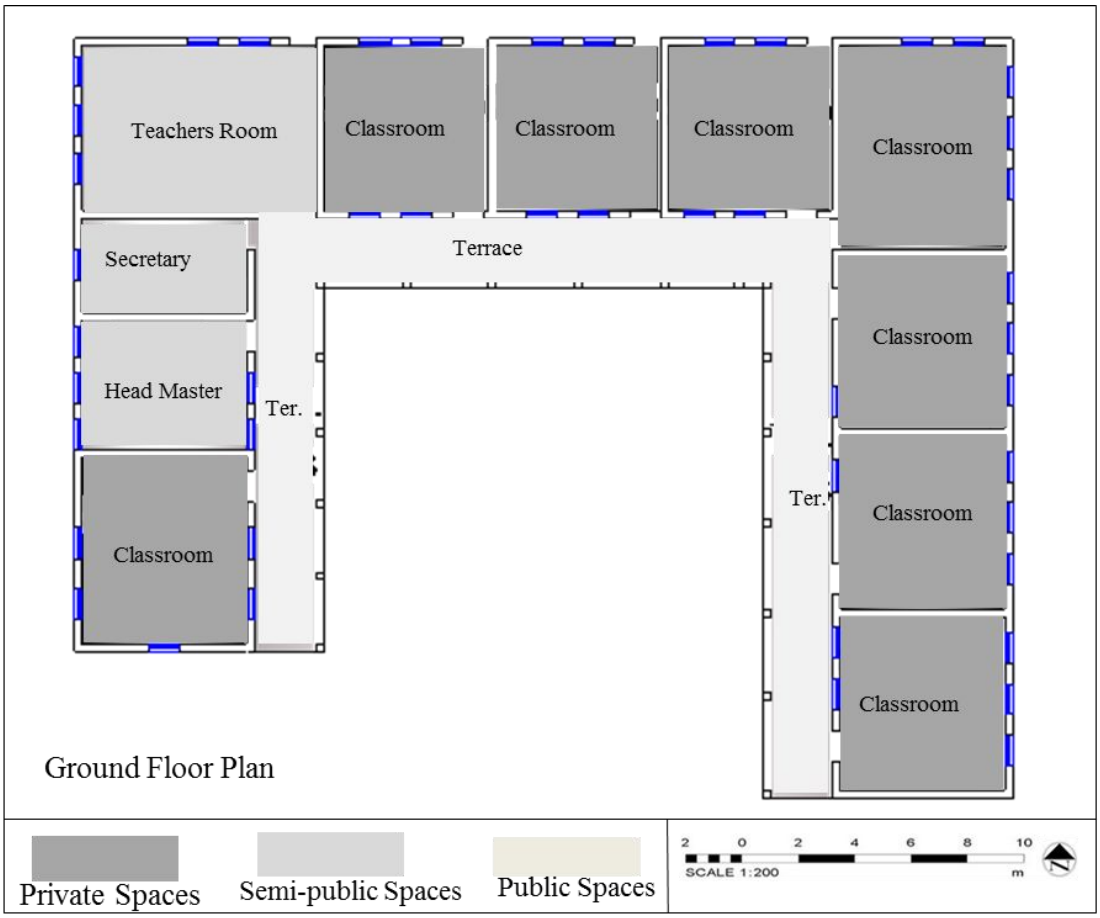


Figure 66: Spatial organization case BCSB 14 **(Sehit Huseyin Akil ilkokulu)**

4.5.1.2 Formal Organization

The formal organization defines the shape of the buildings and helps to determine the size and volume of the structure. In each case analyzed, the 2-dimensional and 3-dimensional simplified forms will be used visually to support the process. The process proceeds in the order of all Famagusta case (BCSB 7-14).

In case BCSB 7 (Endustri Meslek Lisesi), Figure 67 and cases 8 (Gazi ilkokulu), Figure 68, shows a similar 2-dimensional formal approach. In the 3-dimensional, case BCSB 7

has a pure flat roof at two levels to appreciate the floor heights symmetrically on East/West directions and to the North facade of the building. The porch also obeys the top flatness/stepping properties with semi-circular entrance Palladian steps on both sides of it externally at the same datum with the basement section. The internal spaces show a rectangular shape exception of the subject master office at the North part of the building which shows a half truncated hexagonal shape. The windows and decorative elements on the South facade display a repetitive character towards right/left of the porch unto the top floor.

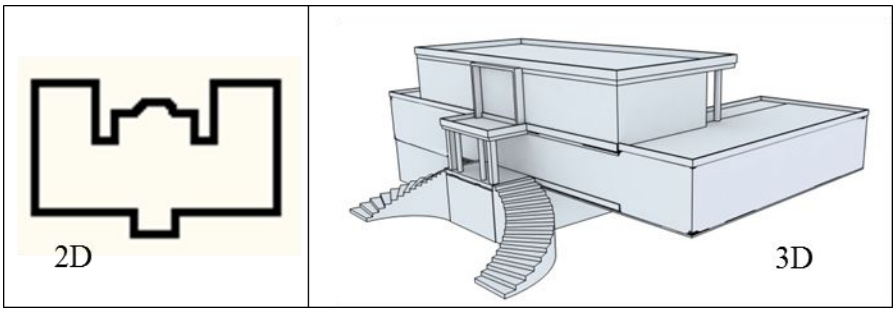


Figure 67: Formal organization of case BCSB 7- Endustri Meslek Lisesi

While in case BCSB 8 (Gazi ilkokulu), the internal spaces also cling to the rectangular shape property in the 2D with the headmaster taking up the half truncated hexagonal shape like the subject master's office in Endustri Meslek Lisesi. The top of the building is roof with segmented shapes of pitch roof. The porch centrally placed, and protruding from the line of the main building and inviting the public to the main entrance door that is surrounded by rectangular shaped steps. The facades show a definite similarity of windows and ornamentation around them resting on a rusticated base like Endustri Meslek Lisesi but without a basement. The two cases possess a semi-open colonnaded terrace situated at the North side elevation of the building in a repetitive manner. The

ones for Endustri Meslek Lisesi show a higher degree of openness than Gazi ilkokulu but with similar character (See Appendix A: Inventory Form no.BCSB 7 and 8).

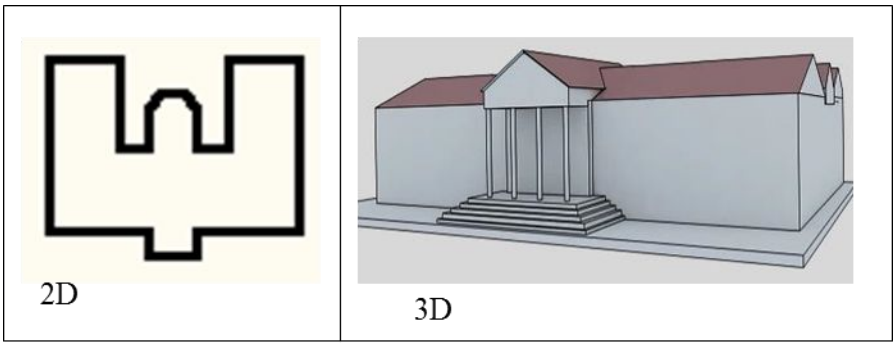


Figure 68: Formal organization of case BCSB 8-Gazi ilkokulu

Case BCSB 9 (Canbulat Özgürlük Ortaokulu) displays a combination of rectangular shapes acting as a whole in the 2D form with open courtyards in-between the blocks. The roof shows a complete flatness in the 3D representation (Figure 69). The porch flushes with the administration (semi-private spatiality) setback of the building with a fat cantilever canopy and a rectangular pavement leading to the main entrance door. The terrace is semi-open with circular columns on the South facade and surrounding the front parts of the courtyards on both the ground and upper floors. All spaces with similar functions show the same rectangular cells in a repetitive size/volume. Pragmatically, agreeing with the phenomenon noted in the spatial organization analyzed before. The vertical and horizontal rhythm of facades elements fall in that direction. The floor clearance in each floor is kept at (3.6m) (See Appendix A: Inventory Form no.BCSB 9).

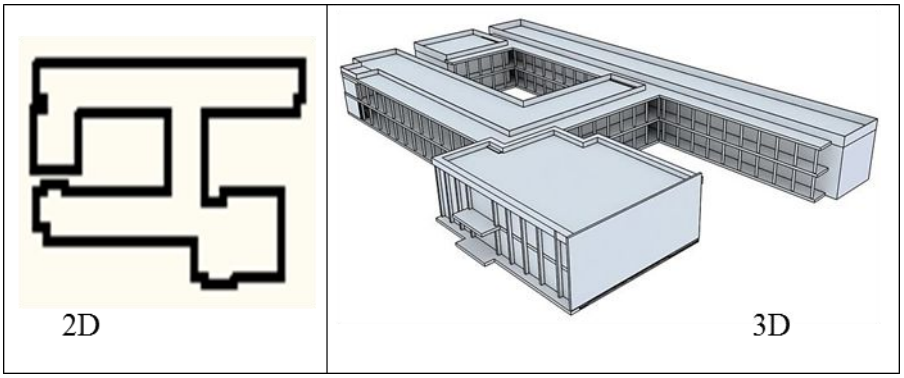


Figure 69: Formal organization case BCSB 9-Canbulat Özgürlük Ortaokulu

In case BCSB 10 (Polatpasa ilkokulu), the spaces observed show a repetitive placement of similar shapes of rectangle for the private and semi-private spaces in the 2D arrangement. A pure top shape of flat roof and a slanted lean-to joined the private spaces on the horizontal block in the South view as shown in the 3D formal graphical format (Figure 70). The courtyard form of semi-open terrace, incorporated with an array of circular stanchions on both blocks that constitute the building form. The porch though modified to another function as mentioned in the previous theme is having a floating canopy over the enclosed skin bisecting the two main blocks that make the building. The floor height is (3.6m) and informs a uniformity of facades elements that response incidentally to previous studied cases.(See Appendix A: Inventory Form no.BCSB 10).

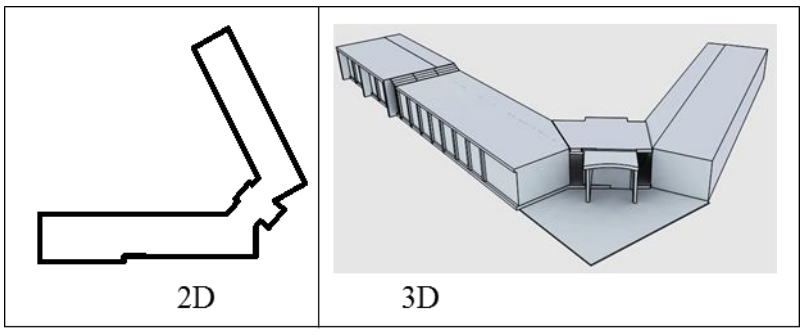


Figure 70: Formal organization case BCSB 10-Polatpasa ilkokulu

Case BCSB 11 (Canbulat ilkokulu) appears to have a similar rectangular shape in the 2D form showing all spaces with same functions possessing similar form qualities. The upper floor also shows a pure rectangular shape in the 2D with a pure pitch roof gable shape over the private areas. The West and East semi-private sections shows the pitch roof shapes, while an intermediary semi-private block show a pure flat roof shape as indicated in the 3D (Figure 71). The attached staircase at the front of the building also follows the properties discussed. The South facade intercepted by a rectangular shape staircase and a lean-to roof over it. The floor heights uniformly maintained at (3.0m). The terrace is semi-open colonnaded at the South view showing front terrace qualities as explained in the previous cases and completely fused with the porch, which is part of the flat roof section of the building (See Appendix A: Inventory Form no.BCSB 11).

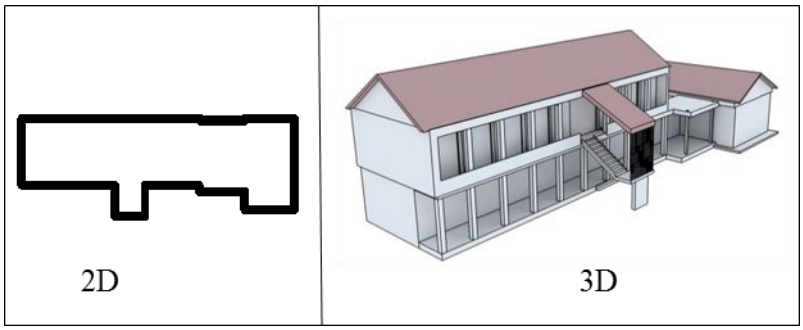


Figure 71: Formal organization case BCSB 11-Canbulat ilkokulu

In case BCSB, 12 (Alasya ilkokulu) depicts the same formal character in the 2D formation of the spaces, very visible with private spaces (classrooms) at the North zone of the building. The top shape is an integration of flat and pitched roofs. In general, the building structure is rigid because of the monotonous subtractive nature of the rectangular blocks in the South-East zone of the building as evident with the 3D (Figure 72). The terrace is also colonnaded in square shapes, semi-open and running one-sided on all the private blocks to the North area and crosses axially between the

semi-private/private spaces. It shows the courtyard behavior as it relates other cases previously accessed. The floor volumes vary, the units to the South are at (3.6m) height while the three at the North are at (4.0m). The elements on the South facade remain consistent with similar shapes and likewise the ones in the private spaces sections. The only areas with the pitch roof shape are the conference room and the porch to the entrance lobby (See Appendix A: Inventory Form no.BCSB 12).

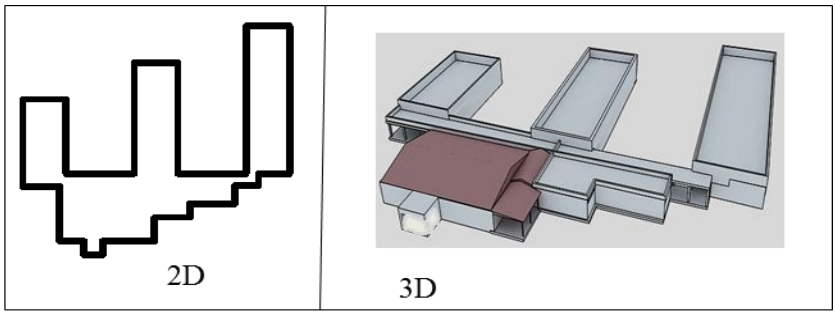


Figure 72: Formal organization case BCSB 12-Alasya ilkokulu

In case BCSB 13 (Gazi Mağusa Meslek Lisesi), the formal recurrence of the use of same shapes for spaces with similar functions on the 2D. The 3D structure shows a pure flat roof shape on the single floor and upper floor levels of the building (Figure 73). While the porch has a floating form connected to the terrace directly to the entrance of the building. The floor height for the story section is at (3.6m) and the single floor block, and the porch is at (2.4m) height. The terrace is likewise, showing the semi-openness properties at the South zone facade and colonnaded. (See Appendix A: Inventory Form no.BCSB 13).

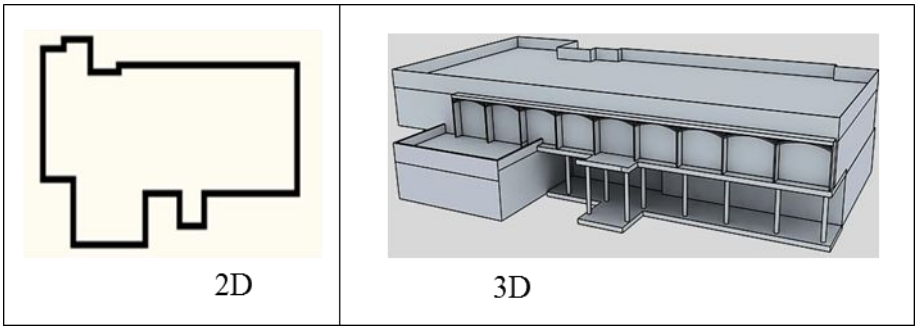


Figure 73: Formal organization case BCSB 13-Gazi Mağusa Meslek Lisesi

Case BCSB 14 (Sehit Huseyin Akil ilkokulu) follows the same formal characteristic of repetition in the 2D composition of the building, the private spaces represented in rectangularity and square forms. The semi-private spaces stick to the simple rectangular shape. The 3D structure shows a pure pitch hip roof and a lean-to over the semi-open terrace on the South view (Figure 74). The terrace together with the two additive blocks to the South zone in symmetry position creates an open space for outdoor engagements. The floor height is at (3.6m). The facade elements entirely conform to the formal behavior of repetition horizontally and vertically as remarked in the previous sections of the discourse (See Appendix A: Inventory Form no.BCSB 14).

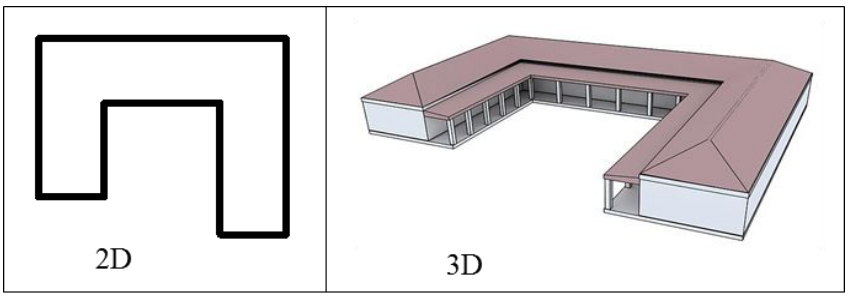
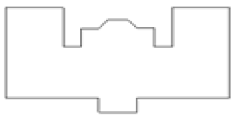
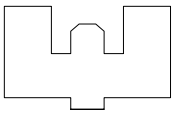
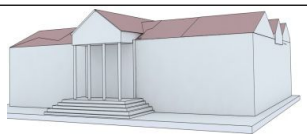
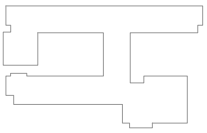
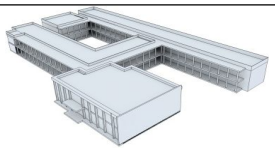
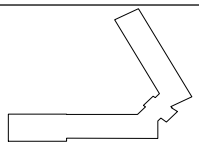
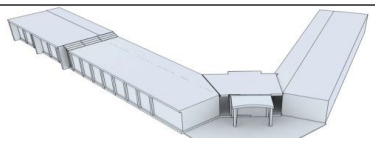
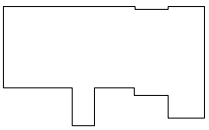
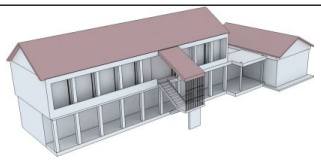
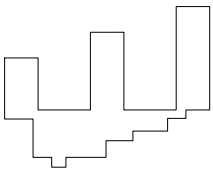
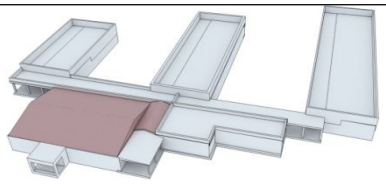
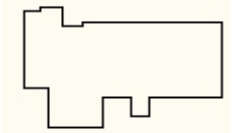
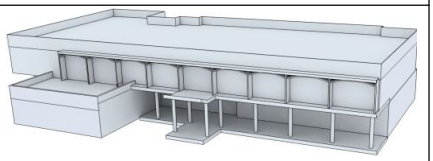
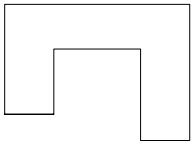
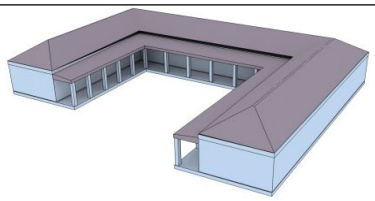


Figure 74: Formal organization case BCSB 14-Sehit Huseyin Akil ilkokulu

The 3D formal summary of Famagusta cases show a post and lintel character of repetition of straight facade shape and flat/gentle slope (approximately ≤ 10^{o}) of roofs

(strongly supported by weather conditions). The summary of the formal organization of all the cases from Famagusta is given in (Table 13).

Table 13: Formal Organization of cases from Famagusta (BCSB 7-14)

Cases	**Formal Organization**	
	2D	**3D**
BCSB 7-**Endustri Meslek Lisesi**		
BCSB 8-**Gazi ilkokulu**		
BCSB 9-**Canbulat Özgürlük Ortaokulu**		
BCSB 10-**Polatpasa ilkokulu**		
BCSB 11-**Canbulat ilkokulu**		
BCSB 12-**Alasya ilkokulu**		
BCSB13-**Gazi Mağusa Meslek Lisesi**		
BCSB 14-**Sehit Huseyin Akil ilkokulu**		

4.5.1.3 Architectural Elements

The visual appreciation of the building's fabric, apart from the spatial and formal composition, in many instances focuses on the elements on the building facades. The architectural elements considered in this section narrowed on the porch, door, window, cornice, balustrades and staircase that define the peculiarity of the main selected facade from Famagusta (cases BCSB 7-14). (See Figure 75-76).

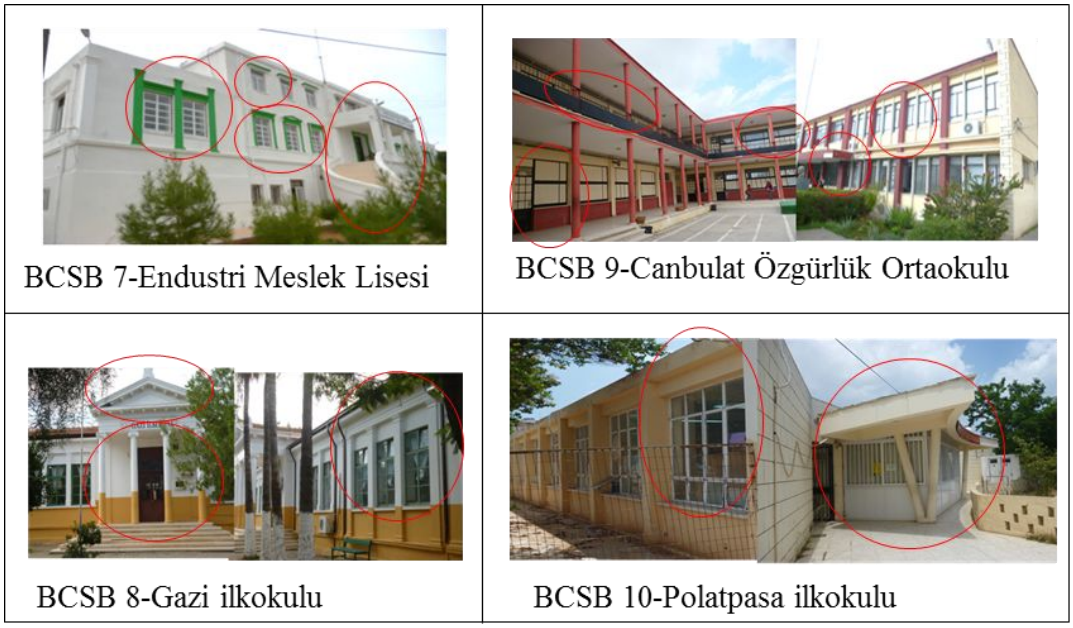


Figure 75: Architectural elements on main facades from Famagusta cases (BCSB 7-10)

BCSB 11-Canbulat ilkokulu

BCSB 13-Gazi Magusa Meslek Lisesi

BCSB 12- Alasya ilkokulu

BCSB 14-Sehit Huseyin Akil ilkokulu

Figure 76: Architectural elements on the main facades from Famagusta cases (BCSB 11-14)

Porch

The Porch in case BCSB 7 (Endustri Meslek Lisesi) is semi-open, resting on a rusticated base with semi-circular steps on both sides springing from the natural ground datum (at the same level with the basement) and in simple rectangular shape in the 2D form. The top has a flat RC roof supported by (2) Doric and (2) Ionic columns and an array of precast white painted balustrades of stones on the South wall. The main entrance door centralized on the North wall opening to the reception. The (4) colonnaded character and entrance door qualities shown are repeated in case BCSB 8 (Gazi ilkokulu) porch. The columns in "BCSB 8" shows Doric order qualities, standing on the South wall agreeing with the semi-open character and painted in cream/white color but currently modified to link the teachers room that was originally reception in British Period. The structure stands on a rusticated base protruding from the line of the

building. Stone finished steps finished in gray color surrounding the three sides to the exterior parts of the porch. It has a simple rectangular pure shape on the 2D form with white stepped pediments over the straight beam below the delineated cornice and gable pitched roof resting on the top.

The porch for case BCSB 9 (Canbulat Özgürlük Ortaokulu) is freestyle, set on a raised rectangular floor with red painted RC cantilever canopy structure over it and leading the public to a semi-public space (reception) through the main door with side windows obeying the portico character of British Colonial Architecture discussed in the literature. In this case, the vertical structural elements (columns) stands embedded in the wall of the South view in red color and separating the windows as fin walls. Case BCSB 10 (Polatpasa ilkokulu) shows a porch modified into archives but the colonnaded character is kept authentic. Although, non-load bearing partitions of aluminum with glazing are used to define it. The top floating RC roof painted in cream color is maintained. However, with the presence of a door to the right and left of the porch, the entrance function is not destroyed. In case BCSB 11 (Canbulat ilkokulu), the porch is integrated with the terrace in a semi-open manner and acting as a distributing space for entry either to the administration section on the South-east section with a door to the reception, the Kitchenette and the subject master office. Steel pipes are used as columns to support the RC flat roof. The porch in case BCSB 12 (Alasya ilkokulu) has a simple rectangular shape on the 2D and the upper part takes up a pure pitch roof of transparent corrugated sheets leading to the entrance lobby in a semi-open arrangement. The porch in Case BCSB 13 (Gazi Mağusa Meslek Lisesi) also has a semi-open quality, colonnaded with a floating roof on the top painted green and linking the terrace directly

to the building and celebrating the main entrance door. For all the cases with porch, (see Appendix A: Inventory Form no.7-13).

Doors

Case BCSB 7 (Endustri Meslek Lisesi) facade shows three door types; the main entrance door is double swing special design hardwood glazed panel door painted black with top fixed light and cultural sign that forms the Logo of the school. A green painted pediment surrounds the 3-sides of the door. The second door opens to the workshop in the basement with a double leave aluminum panels used to replace the original wooden door but the wooden frame is kept intact even though the door leave is changed. A high level fixed light made from aluminum glazing is incorporated. The third door opens to the subject master office on the top floor with double leaves aluminum glazed door (new material) couple to dark sprayed wooden frame (original material) and with a high-level fixed light. Case BCSB 8 (Gazi ilkokulu) shows the main entrance door as brown painted double swing metal glazed panel door with top fixed metal plate and cream/white stone pediments decoration surrounding it. The facade of case BCSB 9 (Canbulat Özgürlük Ortaokulu) shows two entries. The main entrance door is black coated double swing metal glazed door with black painted iron burglary attachments and top fixed light. Projected side windows are couple on the right/left sides of the door. The second door is single swing, black painted steel glazed door on all the classrooms with top fixed light and a side projected bottom (opaque) and top (reflective) combined glazed window.

Case BCSB 10 (Polatpasa ilkokulu) shows single swing black iron burglary door functioning as the entrance door and opening into the terrace beside the porch. In Case

BCSB 11 (Canbulat ilkokulu) shows two door types; Single swing white coated aluminum glazed door with top fixed light windows on all the classrooms, used to replace the original wooden glazed doors. The second type is single swing aluminum glazed door with right and left side fixed glass panels attached, opening to the kitchenette. Case BCSB 12 (Alasya ilkokulu) shows single swing dark brown coated metal glazed door opening to the canteen and kitchenette. Case BCSB 13 (Gazi Mağusa Meslek Lisesi) displays the entrance door of double swing white coated metal glazed door with side fixed light windows. Case BCSB 14 (Sehit Huseyin Akil ilkokulu) shows double swing light gray/cream painted hardwood panel doors with top fixed light and wire mesh around it in all the spaces opening to the terrace. White painted stone pediments decorations are place round the doors. (See Appendix A: Inventory Form no. BCSB 7-14).

Windows

The facade of Case BCSB 7 (Endustri Meslek Lisesi) shows three sets of white coated aluminum windows used to replace the original wooden glazed windows but the original dark wooden frames are maintained. The new window materials used in (floor 2) windows show imitation of the casement patterns of the original types with the maintenance of stones pediments/pilasters surrounding the windows painted in green color with top fixed light. The basement floor currently shows aluminum sliding window panels. In (floor 3), two panels of white coated aluminum glazed sliding windows with single pane top fixed light are used with an upper stone canopy and straight stone pediments at the bottom, all painted in green color. Case BCSB 8 (Gazi ilkokulu) shows 3 panes and double swing green coated metal glazed casement windows with 2 panes top fixed light and white/yellow painted stone pilasters attached

as vertical decorative themes in a set of 4 defining 3 windows. Straight white stone pediments run horizontally at the window sill level across them with a white top stepped pediment end to end of the facade from both sides of the porch. Case BCSB 9 (Canbulat Özgürlük Ortaokulu) shows and black coated metal glazed projected window with bottom fixed light and top projected panes with bottom straight gray finished stone pediments for all windows on the administration section of the South facade. Another set of windows identified are on the classroom sections of the facade, of black coated aluminum glazed (reflective/opaque), which are new instituted materials for the original metal glazed types with fixed light panes at the bottom and straight gray colored stone pediments placed at same position.

Case BCSB 10 (Polatpasa ilkokulu) shows four panels gray coated metal glazed projected windows with four bottom projected panes and four panes top fixed light. All are delineated with straight gray stone bottom pediments. In case BCSB 11 (Canbulat ilkokulu) shows 2 panes white aluminum glazed fixed light windows placed over the doors on the classroom sections. Four units white aluminum glazed sliding window is displayed on the subject master office and 2 panes white aluminum projected on the store are used to replace the original wooden casement windows. Bottom straight gray stone pediments are added on the stores windows to the administration section. Case BCSB 12 (Alasya ilkokulu) shows three set of brownish coated metal glazed panel windows with top projected panels. Towards the right-side of the South facade is two with different sizes of same metal glazed casement window with bottom fixed light and straight bottom gray stone pediments. The second type is brown metal glazed projected windows with bottom straight gray stone pediments located towards the left-side of the South facade. The third is fixed light brown metal glazed windows on same axis with

bottom straight gray stone pediments. Case BCSB 13 (Gazi Mağusa Meslek Lisesi) shows five panes white coated metal glazed casement windows on ground floor offices and workshop sections. A similar description is equivalent to the windows on the upper floor classrooms/computer room with green segmented arch pediments and green fins positioned in front of the window as shading devices. All the windows have bottom straight gray stone pediments. In case BCSB 14 (Sehit Huseyin Akil ilkokulu), two panels of white aluminum glazed casement windows with top fixed light and straight white stone pediments surround the windows acting as a replacement for all the original metal glazed casement windows. (See Appendix A: Inventory Form no.7-14).

Cornice

The cases whose roofs show cornices are case BCSB 8 "[(Gazi ilkokulu) and 14 (Sehit Huseyin Akil ilkokulu)]". The cornice in case BCSB 8 is delineated at the gable of the porch with white triangular, stepped pediments/entablature. Queen Victoria ornamentation are attached at the peak and the two base points of the cornice on the gable ends. The decoration themes are made from stones and finished in white color emphasizing the main entrance of the building. In case BCBS 14, the cornice shows an outcome of renovation works implemented by TRNC government in the building in 1975. The insertion of a pitched roof over the existing RC flat roof explains an integration that gives the cornice a yellowish effect on the overhang sides of the building. The triangular pendentive dressing finished in stepped yellow stone pediments. (See Appendix A: Inventory Form no.8 and 14).

Staircase

In case BCSB 7 (Endustri Meslek Lisesi), a semi-circular yellow stone steps instituted at the entrance of the building on both ways in Palladian style in symmetry arrangement and white painted stone dwarf walls included on both ways of the steps to guide users. The staircase for case BCSB 11 (Canbulat ilkokulu) shows double flights RC stairs painted with cream and the treads/risers are finished with same yellow stones as in case Endustri Meslek Lisesi). The staircase is supported by two cream painted rectangular central short RC columns while the entire body of the staircase, totally cladded by green iron bars that support the lean-to roof and green coated iron balustrades incorporated. It also informs on the addition works implemented on the building after British Period (See Appendix A: Inventory Form no.7 and 11).

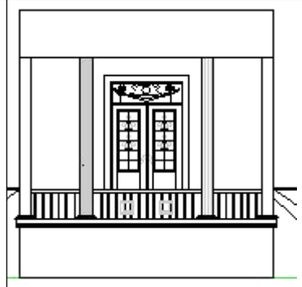
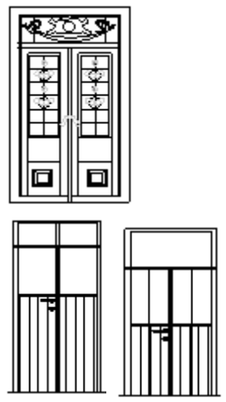
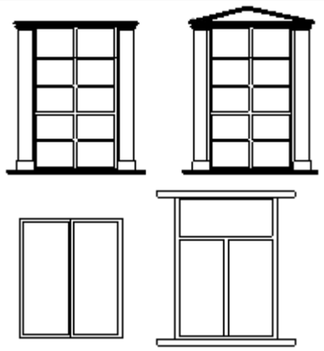
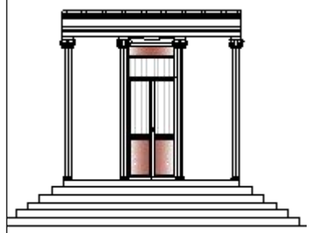
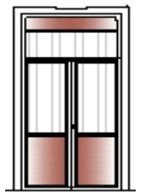
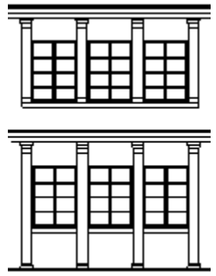
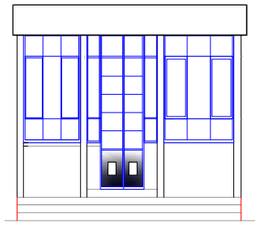
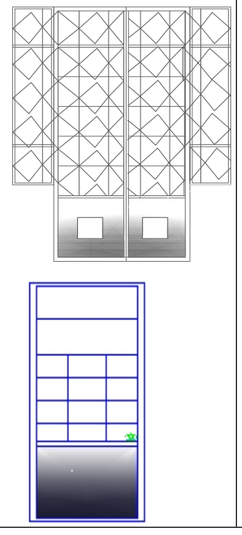
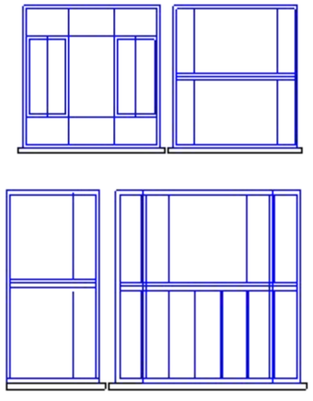
Balustrades

The balustrade identified in case BCSB 7 (Endustri Meslek Lisesi) is of three types based on the materials used for it construction. The steps leading to the porch from the natural ground level has dwarf stone walls as balustrade as explained in the previous section, precast white stone moldings are used on (floor 2) and gray coated iron are used on (floor 3). The stone type is arranged on the South wall of the porch while the iron type is on the terrace of (floor 3) facing the South direction of the building. The design of both retains the same construction technique; The vertical components of the balustrades received a top rail capping obeying the material choice of each type. In case BCSB 9 (Canbulat Özgürlük Ortaokulu), a prefab black coated iron with a black steel plate covering installed carefully to the base section of the vertical iron bars supporting the iron top rail on same color (as new materials to the terrace). The balustrades run across the classrooms' terrace facing the South facade of the building. The balustrade

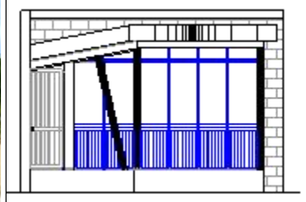
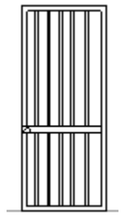
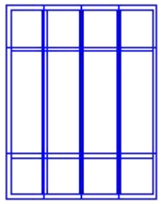
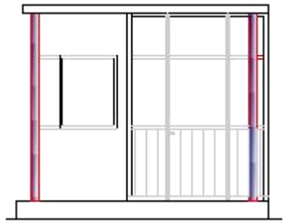
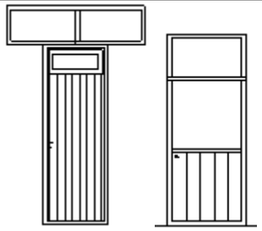
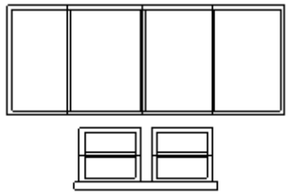
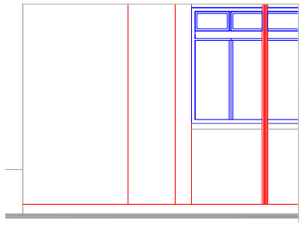
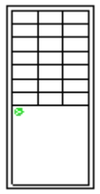
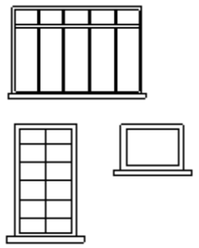
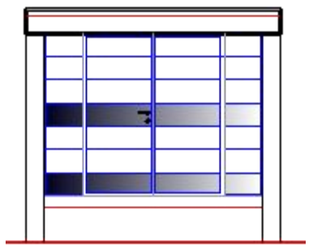
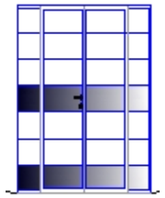
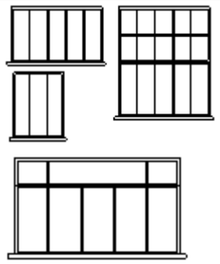
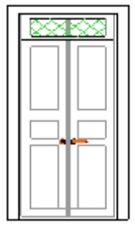
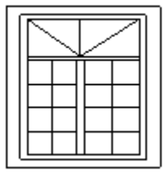
for case BCSB 11(Canbulat ilkokulu) follows side by side the direction of the flights of the staircase but overshadowed by the green iron grilles cladding that encloses the stairs. In the upper floor terrace, a dwarf wall is used in combination with green iron burglary proofing to replace the place of the balustrades. (See Appendix A: Inventory Form no.7, 9, and 11).

The summary of the architectural elements described for Famagusta cases, shown in (Table 14).

Table 14: Architectural elements of case Famagusta cases (BCSB 7-14)

Cases	Photo	Porch	Doors	Windows	Cornice	Staircase/Balustrade
BCSB 7- **Endustri Meslek Lisesi**						 
BCSB 8- Gazi ilkokulu						
BCSB 9- **Canbulat Özgürlük Ortaokulu**	 					

Continuation of "(Table 14)"

Cases	Photo	Porch	Doors	Windows	Cornice	Staircase/Balustrade
BCSB 10- **Polatpasa ilkokulu**						
BCSB 11- **Canbulat ilkokulu**						
BCSB 12- **Alasya ilkokulu**						
BCSB 13- **Gazi Mağusa Meslek Lisesi**						
BCSB 14- **Sehit Huseyin Akil ilkokulu**		No porch.				

4.5.1.4 Functional Assessment

The functional assessment of a building obviously sticks to the spatial organization of the spaces and the use of either old or new functions of the building (Brooker, et al. 2007). A lack of such relationship cannot allow the identified space to operate in solitary. The cases studied fall under administrative buildings (schools) of the region. Therefore, the buildings must cater for the sociological, psychological needs of the users and its physical/structural requirements. Their values need enhancement in the present in order to serve future generations of the place in a sustainable manner. In the literature part, scholarly works revealed that school buildings in colonial times functioned as centers of learning in reading, writing, and arithmetic. The cases BCSB "(7-14)" in Famagusta, performs the following activities during/after official hours teaching, reading, writing, testing/experimenting, and singing. Additional functions are counting, playing, socializing, repairing, constructing, computing, refreshing and administering. Precisely, the findings of the eight cases in the spatial organization section shows linear and a conjugate of linear with (axial or centralized) spatiality.

In the cases previously listed, some depict a direct and simple, functional order while others X-rays a complete formation traceable to the school type, the demography of pupils and support from NGOs/government influences. The spaces further simplified into the following category for easy handling of data and avoidance of repetition:

- Porch/Terrace
- Reception
- Study spaces
- Offices
- Halls

- Auxiliary spaces

Porch/Terrace

The porch constitutes the primary point of entrance to the school buildings examined in Famagusta. It leads users to the entry door of the reception and falls within the public space of the school buildings. There are three types of porch design identified:

- Porch covered with a pitch roof BCSB "[8 (Gazi ilkokulu) and 12 (Alasya ilkokulu)]"
- Porch with RC flat roof BCSB "[7 (Endustri Meslek Lisesi), 10 (Polatpasa ilkokulu), 11 (Canbulat ilkokulu) and 13 (Gazi Magusa Meslek Lisesi)]"
- The Porch covered with RC cantilever BCSB 9 (Canbulat Özgürlük Ortaokulu). One case is selected from each porch type and shown (Figure 77).

BCSB 8-Gazi ilkokulu BCSB 7-Endustri Meslek Lisesi BCSB9-Canbulat Özgürlük Ortaokulu

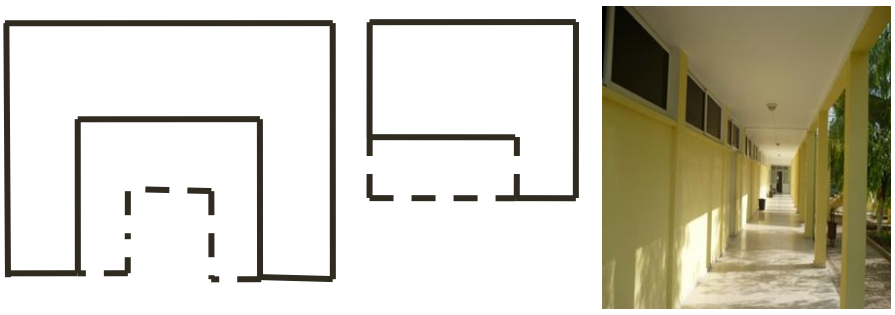
Figure 77: Porch types from Famagusta cases (BCSB 7-14)

However in case BCSB 10 (Polatpasa ilkokulu), the porch is currently modified to archives (Figure 78).

Figure 78: Porch modified to Archives from Famagusta cases (BCSB 10-Polatpasa ilkokulu)

The terrace function supplements the entrance duties of the porch with regards to the present state of the schools. Three types of terraces grouping define Famagusta cases. The front type, rear type and combined/courtyard type.

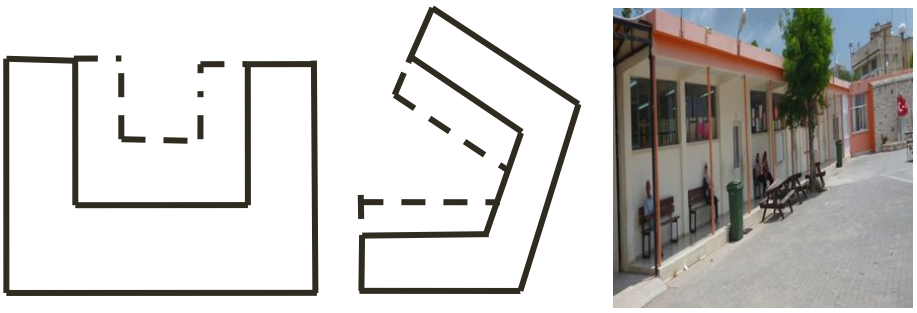
- 'Type 1' the front type as the name implies, it is semi-open, colonnaded and incorporated by the side of the porch or taking the place of the porch on the South zone of the building. It is also one-sided either to the West or East (not occupying the entire front).The cases that fall under this type include BCSB "[11 (Canbulat Özgürlük Ortaokulu), 13 (Gazi Mağusa Meslek Lisesi) and 14 (Sehit Huseyin Akil ilkokulu)]". Although this type resembles the (Type 1) in cases, from Calabar cases (BCSB 1-6) previously analyzed but their orientation differs (Figure 79).



Type 1

Figure 79: 'Type 1' Terrace from Famagusta cases (BCSB 11-Canbulat ilkokulu)

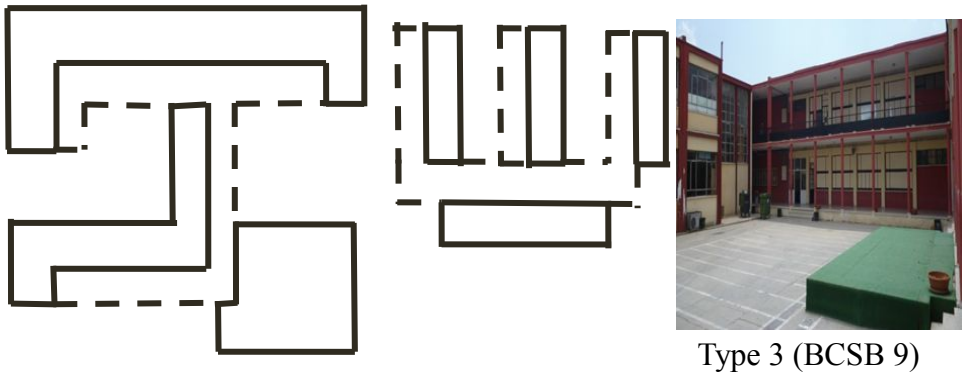
- ‘Type 2’ the rear type located in the North zone and North-west/South-west region of the buildings possess a similar descriptive character with “(Type 1).” The cases with this form of arrangement are BSCB “[7 (Endustri Meslek Lisesi), 8 (Gazi ilkokulu) and 10 (Polatpasa ilkokulu)]” Figure 80.



Type 2 (BCSB 10)

Figure 80: ‘Type 2’ Terrace from Famagusta cases (BCSB-Polatpasa ilkokulu)

- ‘Type 3’ the combined/courtyard type is a combination of either front/rear or any of the two with additional content surrounding the courtyard. Maintaining the semi-open and colonnaded properties. The examples are cases BCSB “[9 (Canbulat Özgürlük Ortaokulu and 12 (Alasya ilkokulu)]”. The cases with this sort of Terraces include Figure 81.



Type 3 (BCSB 9)

Figure 81: ‘Type 3’ Terrace from Famagusta cases (BCSB 9-Canbulat Özgürlük Ortaokulu)

Reception

The reception falls under one of the spaces that were the core of the schools and functions as a welcoming space for visitors and distributing users to other spaces within the building during the early period of British Colonization in Famagusta. It acted as an important semi-public space for pupils, teachers, and visitors. Eventually, with the move of the late influences for openness/freedom and control of the schools to present times by TRNC government, some modifications are accorded. The introduction of teachers room in cases BCSB “[(8 (Gazi ilkokulu) and 10 (Polatpasa ilkokulu)]”. The adjustment is possible with the availability of the terrace at the North or North-west/South-west sides of the affected cases. In case BCSB 9 (Canbulat Özgürlük Ortaokulu), light partitions are introduced to create within the reception service spaces for photocopying and showroom for pupil’s artistic work, trophies, and placement of enlarged pictures of graduates of the schools. The reception is identified in all cases from Famagusta except Sehit Huseyin Akil ilkokulu. Five of the cases (Endustri Meslek Lisesi, Gazi ilkokulu, Canbulat Özgürlük Ortaokulu, Polatpasa ilkokulu, Canbulat ilkokulu and Gazi Mağusa Meslek Lisesi), indicate a similarity of direct access to the reception from the porch, with two to four doors adjoining other spaces on the Cardinals of the reception (Figure 82).

BCSB 7 BCSB 9

Figure 82: Photos of Reception from Famagusta cases (BCSB 7-Endustri Meslek Lisesi and 9-Canbulat Özgürlük Ortaokulu)

Study Spaces

The study areas constitute the primary spaces and private spaces for the functioning of the schools when considering the hierarchical placement/usefulness for curricular functions. It comprises classrooms, workshops, laboratories, computer rooms, music rooms and library. The students spent reasonable hours in such spaces than others on daily routines in the buildings. A large proportion of furniture, apparatus, and other study materials are often kept safe in these areas.

To support the above-stated functions, case BCSB 7 (Endustri Meslek Lisesi) has workshops and laboratories distributed at three-floor levels. The workshops on the basement have two windows facing the East wall and South wall. One door opens on each of the walls mentioned and the second door opens to the workshop master office. By the volume of space measured, the windows do not transmit enough daylight to the workshops. The workshops on the assumed ground floor section show different windows and doors character. Two windows faces the terrace from the West wall and replicated at the East wall of the workshop. A total of three doors are seen on the

workshop at the North-east direction with one out of three opening to the terrace and the remaining opens to outside of the building. A semi-open doorway on the East side of the principal office links the two workshops together. The second workshop shares a party wall with the principal office and has a total of (4) windows, of which (3) are facing the East wall and (2) facing the South wall. The daylight admitted into these workshops is more appreciable than the ones in the basement. The two laboratories on the top floor are similar in size, orientation, and quantities. Each of them contains a total of (5) windows, (3) faces the South wall while (2) are facing the North wall of the laboratories with one door opening on the same partition to the terrace for each. All windows analyzed in this floor depict the same composition. (See Appendix A: Form no BCSB 7).

In case BCSB 8 (Gazi ilkokulu), there are four sets of classrooms based on their windows placement/sizes and each class type repeated twice. All sets of classes has (1) door which opens to the terrace. The first set has a total of (4) windows for which (1) faces North wall and (3) are facing the South wall of the classroom. The second set has (7) windows, of which (3) are faces the South wall and (4) are on the East wall of the classroom. The third set has (5) windows, (3) of it facing the East wall and (2) opening to the terrace on the East wall of the classroom. The fourth set contain (5) windows, (3) faces the North wall and (2) facing the East wall of the classrooms at the North sections of the building. Apart from the first set classrooms whose windows are not enough to admit the required daylight, other sets do. All windows accessed possess the same size and character. (See Appendix A: Form no BCSB 8).

Case BCSB 9 (Canbulat Özgürlük Ortaokulu), show a total of 26 classrooms with similar configurations on both floors. All classrooms on the ground floor has (2) doors

opening in the opposite direction of the North (courtyard) and South (terrace) walls. While the ones on the upper floor only shows (1) door opening on the South wall to the terrace. In each classroom, total of (6) windows are identified: Having (3) for each facing both North and South walls of the classrooms. All the classrooms admit enough daylight. The laboratory shows two categories of both sizes and fenestration. Two are located on the ground floor while one is on the upper floor. The first group assumed a rectangular shape with a total of (8) windows. It has (4) windows on each partition facing East and West directions of the walls. The second category follows a similar orientation for window openings but with a square shape on the ground floor having (6) windows. They admit enough daylight. The building has one library on the upper floor with (6) windows of which (3) for each are facing East/West directions of the walls. The windows admit enough daylight. The music room is on the upper floor having (10) windows concentrated on only the North wall, which is not an ideal arrangement. The windows do not admit enough light. (See Appendix A: Form no BCSB 9).

Case BCSB 10 (Polatpasa ilkokulu) shows 8 classrooms with similar spatial and formal arrangements. One door in each classroom opens to the terrace on both blocks that constitute the building. On the horizontal block; 5 classrooms, each having (5) windows of which (3) are facing the South wall with appreciable width/height clearance. While the (2) windows facing the North wall to the terrace are at high-level to screen off distractions from the terrace. The above explanation applies to the (3) classrooms on the slanting block but in a mirrored manner. The admission of daylight from outside is enough for the efficient functioning of the classrooms. (See Appendix A: Form no BCSB 10).

Case BCSB 11 (Canbulat ilkokulu) consists of (6) classrooms of which (3) are located on the ground floor, and (3) are positioned on the upper floor. The whole classrooms show a similar spatial and formal organization in both floors. Each classroom contains (5) windows facing same direction. A total of (3) windows are maximally facing the North wall, and (2) are on the opposite side facing the South wall at high-level. One door applies to all classrooms opening to the terrace. (See Appendix A: Form no BCSB 11).

In case BCSB, 12 (Alasya ilkokulu), shows eight classrooms, and one music room define the study spaces and accenting to the uniformity of spatial and formal character. All the study areas show a single door opening to the terrace. Each of the spaces has (7) windows, with (4) facing the East wall and (3) in the opposite direction facing the West wall. An exception exists on the (2) windows on the extreme points on the two longitudinal blocks at the North sections of the building having extra (2) windows. The whole windows admit enough daylight. (See Appendix A: Form no BCSB 12).

Case BCSB 13 (Gazi Mağusa Meslek Lisesi) has three study spaces: classrooms, computer room, and workshop. Two types of classrooms situated on the upper floor; the first type show (3) windows of which (2) face the South wall and (1) facing the North wall of the classroom. The second type show (4) windows, (2) are facing the North wall and (2) are facing the South wall of the classroom. All the classrooms contain a door opening to the lobby. The computer room has (4) windows only on the West direction. While the workshop located on the ground floor has (4) windows with (2) facing the East wall direction and (2) facing the South wall direction of the workshop. It also has two doors that open to the lobby. The classrooms admit enough

daylight, but the daylight allowed by the windows for the computer room and workshop are not enough. (See Appendix A: Form no BCSB 13).

Case BCSB 14 (Sehit Huseyin Akil ilkokulu) has five sets of classrooms. The first group zoned at the North sections of the building and made up of three classrooms. Each of the classroom shows (4) windows upon which (2) are facing the North direction and (2) facing the South direction with one door for each partition located in a similar manner with the windows. The second class has one classroom with (5) windows of which (3) are facing the East direction and (2) facing the North direction of the classrooms. The third class has two classrooms with (4) windows, of which (3) are facing the East wall direction and (1) facing the West wall direction and with one door that opens to the terrace. The fourth class has one classroom with (3) windows facing the East direction and (2) facing the West direction of the classroom and with a door opening to the terrace. The fifth class has one classroom with (5) windows. Two of these windows are facing the East direction, and the same numbers are facing the West direction and one facing the South direction of the classroom on the South-west zone of the building. It has one door opening to the terrace. The windows identified admit enough daylight. (See Appendix A: Form no. BCSB 14). Sample pictures of classroom for cases (BCSB 9 and 11) and workshop for case (BCSB 13) shown (Figure 83).

BCSB 9-Canbulat Özgürlük Ortaokulu

BCSB 11-Canbulat ilkokulu

BCSB 13-Gazi Magusa Meslek Lisesi

Figure 83: Sample of study spaces from Famagusta cases (BCSB 7-14).

Offices

The offices functions as the supervisory section of the schools. It comprises head of the school office, assistant head office, and teachers' room, secretary, counseling room and subject Master's office. The quest to meet the needs of the pupils, lessons preparation/appraisal, public demands, other school workers needs and liaising with the Ministry of Education/government happen in the offices.

Case BCSB 7 (Endustri Meslek Lisesi) is made up of the following offices principal, vice principal, teachers room, secretary and subject master. The principal office and the vice principal are on the assumed ground floor and shows similarity in spatial and formal character assuming the non-load bearing wooden partitions that define the secretary, and the archives are removed. The both offices have (3) windows facing the South direction and (2) facing the North direction with a door to the reception and a second door opening to the terrace on the North direction. The teachers room on this floor is occupying two cells internally connected by a large door. It has (2) windows facing the South wall and (5) facing the West wall direction. One door to it opens to the terrace on the East wall and a Server for Tea collection from the kitchenette is

positioned on the North wall. The subject master is distributed on the three floors of the building. In the basement, (1) window faces both the South and West directions with one door opening to the workshop on both the East and North sections. The subject master on (floor 2) is centrally positioned on the longitudinal lines of the porch/reception and store. It has (1) window facing both the North-east and North-west with one door opening to the North section of the building. The subject master office on (floor 3) is also centrally infused between the laboratories. It has (2) windows facing the South wall and one door opening to the North terrace. while (1) window is facing the North wall direction and one door opens to the terrace on the North section of the building. All windows/doors possess the same qualities. All office identified admit enough daylight except the subject master office on the basement. (See Appendix A: Form no. BCSB 7).

In case BCSB 8 (Gazi ilkokulu), the principal office, secretary and teachers room constitute the offices in this case. The principal has (1no) window facing the North wall direction. Similarly, (1) window also faces both the North-east and North-west walls and (1) facing both East and West walls direction. A single door opens to the South wall to the secretary office. The secretary office is demarcated on three sides (South, East, and West) by a non-load bearing partition made from wooden boards and glass. One door on each of the partitions opens to the terraces and the teachers room (formerly reception). The daylight admitted to the principal office is enough but is insufficient to the secretary and teachers room (due to no linking of it partitions to external areas of the building). (See Appendix A: Form no. BCSB 8).

Case BCSB 9 (Canbulat Özgürlük Ortaokulu) contains the principal office, (2) vice principal office, teachers room, secretary, counseling office and (7) subject master

office . The principal, vice principal, and secretary offices show similar spatial and formal arrangements. In each office (3) windows face either the South or North walls. The principal, vice principal has (1) door opening to the lobby. While the secretary door opens to the reception and the principal also have (1) door opening to the conveniences. The teachers room has (11) windows facing the North wall direction of the administrative section of the building and with (1) door opening on each axis to the reception and the lobby. The offices discussed, admit enough daylight but do not allow for flexible functioning of the offices because of the one-sided representation of the windows. The counseling office on the upper floor has (3) windows on the South wall direction and one door opening to the lobby directly opposite the staircase. The daylight admitted by the windows is not enough. The subject master office on the section of the library/laboratory on the upper floor has one window for each facing the East and West directions. The same properties are repeated on the ones in the ground floor. It is internally linked to the library/laboratory by one door while the one on the middle section to the courtyard with an extra door opening to the terrace. The one on the classroom section of the North area of the building has one window/door facing and opening to both the South and North walls. (See Appendix A: Form no. BCSB 9).

Case BCSB 10 (Polatpasa ilkokulu) has the head master, assistant head master, secretary and teachers room offices. The principal has (1) window facing North-east wall direction and one door opening to the lobby. The assistant head master office show similar character with the head master office, an additional (1) window is added facing the South-west wall direction to the lobby. The secretary is located in-between the principal/vice principal offices and both has only (1) window facing the North-east wall direction on the slanting section of the building. Each of the office shows (1) door

opening to the lobby. The teacher room is zoned on the intermediary unit of the building and shows (1) window facing each of the North-west, South-west, and Southeast walls. It shows one door opening to the lobby and another opens internally to the archives. Although the windows on the head master and secretary offices admit enough light, the orientation is not thoughtfully organized for flexible functioning of the bureau. (See Appendix A: Form no. BCSB 10).

Case BCSB 11 (Canbulat ilkokulu) houses the head master office, teachers room, and subject master offices. The windows show similar properties of (one sided) as analyzed in case BCSB 10 (Polatpasa ilkokulu). The head master office has (1) window facing East wall direction on the ground floor with (1) door opening to the reception. The teachers room shows (3) windows facing the East wall and (1) door to the reception. It also shows separate placement of tables for each teacher and a unified shelve for books. The subject master office has (1) window facing South wall and non-load bearing partition introduced with an internal door opening to the store and the other to the porch. (See Appendix A: Form no. BCSB 11).

In case BCSB 12 (Alasya ilkokulu), the offices include head master, assistant head master, teachers room and secretary. The head master has (1) window for each facing the East and South walls and (1) door on each opening to the terrace and the assistant head master office. The assistant head master has (1) window on each side facing the South and North walls and with (1) door opening to the terrace. The two offices do not admit enough daylight. The teachers room has (2) windows facing the South wall and (1no) facing the North wall of the office with a door opening to the terrace. Daylight admission towards the middle of this office is deficient. There are two secretary offices but disjointed from the principal office. It has (1) window facing each side to the North,

South, and West with closeness to the teachers room and (1) door opening to the terrace. The second secretary is layer in the conference room. It has (1) window facing the East wall and the ones on the North are high-level windows with (1) door opening for each to the terrace and the conference stage. (See Appendix A: Form no. BCSB 12).

Case BCSB 13 (Gazi Mağusa Meslek Lisesi) has the principal, vice principal, teachers room and secretary offices. The principal office has (2) windows facing the South wall to the terrace and (1) high-level window facing the North wall to the lobby. It also show (1) door which opens directly to the secretary, lobby, and the archives. The windows admit enough daylight. The office of the vice-principal and two secretary offices are the same; each has (1) window facing the South wall to the terrace and with a door opening to the reception. The secretary to the principal also has a door opening to the lobby. The vice principal and the two offices agrees to the rigid location of windows as stated in previous cases. The teachers room is represented both on the ground, and upper floors. The one on the ground floor have (2) windows facing the East wall and (1) door opening to the lobby. The daylight admitted is not enough for this volume of space. The one on the upper floor has (3) windows facing the North wall, and (1) each facing the East and West walls with (1) door opening to the lobby. The daylight admitted is enough for it. (See Appendix A: Form no. BCSB 13).

Case BCSB 14 (Sehit Huseyin Akil ilkokulu) has two offices (head master, teachers room and secretary). The head master has (3) windows facing the West wall and (2) on the East wall with (1) door opening to the terrace. The daylight admitted is enough, and the direction of the windows is flexible for the functioning of the office. The teachers room show (3) windows facing West wall direction and (2) facing the North wall and (1) door for each partition opens to the terrace and North section of the building. The

secretary is placed in-between the principal and teachers room, having (1) window facing West wall direction. The daylight it admits is not enough and shows (1) door opening to the terrace (See Appendix A: Form no. BCSB 14). The photos of three offices showed Figure 84.

		
Teachers Room in BCSB 8	Teachers Room in BCSB 11	Head Master Office in BCSB 11

Figure 84: Offices from Famagusta cases (8-Gazi ilkokulu, 11-Canbulat ilkokulu)

The functioning of the offices discussed depend on the school level (the educational system), (Table 15) shows the collation of the offices' designation in each case examined.

Table 15: Designation of offices from Famagusta cases (BCSB 7-14)

Cases	Head of School	Assistant Head of School	Teachers Room	Secretary	Counselling Room	Subject Master
BCSB 7	•	•	•	•		•
BCSB 8	•			•		
BCSB 9	•	•	•	•	•	•
BCSB 10	•	•	•	•		
BCSB 11	•		•			•
BCSB 12	•	•	•	•		
BCSB 13	•	•	•	•		
BCSB 14	•		•	•		

Halls

The meeting halls take care of conferences, award ceremonies, cultural performances, end of term events, parents-teachers meetings and staff meetings. The conference room belongs to this category of spaces. From the findings, only two cases have a meeting hall, BCSB "[9 (Canbulat Özgürlük Ortaokulu) and 12 (Alasya ilkokulu)]". The conference room in case BCSB 9 is arranged in the upper floor plan and bears the quality of maintaining the one-sided windows arrangement. The conference has (12) windows facing the South wall and the daylight transmitted is not enough. It shows (1) door opening to the lobby not sufficient to service audience egress after a full house conferencing and (1) door opens to the store. The hall for case BCSB 12 is efficiently organized and shows (3) windows facing West wall direction, (3) high-level windows to the North wall on the terrace and (1) window facing the East wall on the stage. The two doors on the wall to the terrace on the North wall show one for ingress and the other for egress. The canteen shows (1) door to the conference for servicing of the

audience during functions with links to the kitchenette. The stores to the conference supports it operation and a secretary office incorporated in the conference room by non-load bearing wooden boards partitions. The light admitted is enough to support its functions. The conference room for case BCSB 12 is more flexible and functional than case BCSB 9 (Figure 85). (See Appendix A: Form no. BCSB 9 and 12).

Figure 85: Conference Hall from Famagusta cases (BCSB 12-Alasya ilkokulu)

Auxiliary Spaces

The micro-spaces that make up auxiliary spaces provide a supportive role to the overall functioning of the school buildings/users. They are service areas of the buildings. According to the field study conducted, some schools have separate buildings for services detached from the main building. In spite of this, some cases have the mentioned spaces incorporated into it. These include conveniences, staircases (imperative for cases that are more than one floor), lobbies, kitchenettes, canteen, stores and archives. The overview of the auxiliary spaces in the eight cases studied in Famagusta is tabulated (Table 16).

Table 16: Auxiliary spaces from Famagusta cases (BCSB 7-14)

Cases	Conveniences	Staircase	Lobby	Kitchenette	Canteen	Store	Archive
BCSB 7	•	•		•		•	•
BCSB 8							
BCSB 9	•	•	•	•		•	
BCSB 10			•			•	
BCSB 11	•	•		•		•	
BCSB 12	•			•	•	•	
BCSB13	•	•	•	•	•	•	•
BCSB 14							

Case BCSB 7 (Endustri Meslek Lisesi) has (1) convenience each for males and females on (floor 2) and positioned beside the East/West walls of the store with doors opening to the terrace. The quantity is not enough to service the users of the building. In the same case, two RC double flight staircases are situated at the North section of the building with black painted iron balustrade on one side of it to guide users. The kitchenette opens to the terrace by a door and with simple boiling/warming utensils for Coffee/Tea making for staff. The store has a high-level window facing the wall of the subject master office, thereby admitting insufficient daylight for storage of things even though the space is enough. It has a door opening to the reception on (floor 2). The archives is strongly layered on the vice principal office by a non-load bearing partition with semi-open doorway for storage of students' details and other necessary stationery and shows another door opening to the terrace. (See Appendix A: Form no. BCSB 7).

Case BCSB 9 (Canbulat Özgurluk Ortaokulu) has enough conveniences [(21) WC for students, (3) for staff and (2) for visitors)] on the ground floor. See (Figure 86) for the

students conveniences. Three set of RC staircases are identified. One of it is internally located opposite the reception but with direct access to it and maintains a larger capacity than the other types. The second type is (3) double flight internally located at end points of the classroom sections East/West directions of the building. The third type is single flight and mounted externally at the rear of the North-west classrooms section into the westward courtyard and appearing as service/emergency staircase. The staircases are enough for the linking of users to and from the upper floor of the building. The kitchenette (1) on the ground floor with service doors opening to the terrace and the courtyard. It caters for the preparation of light refreshment for staff. The store on the ground floor is maximized as a cellar from the main staircase situated in the administrative section of the building while (4) of the stores are on the upper floor functioning in a specialized manner to the adjoining space it is attached. (See Appendix A: Form no. BCSB 9).

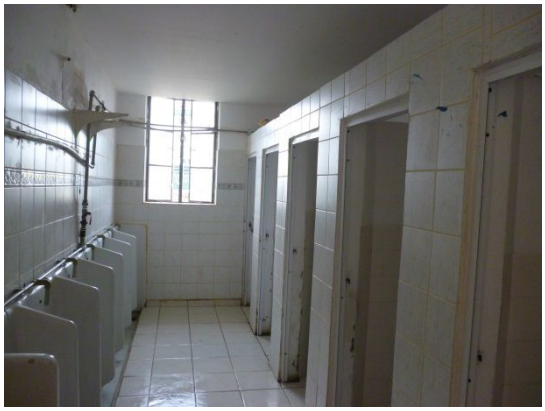


Figure 86: Students Conveniences from Famagusta cases
(BCSB 9-Canbulat Özgurluk Ortaokulu)

Case BCSB 10 (Polatpasa ilkokulu) contains a store in-between the classrooms on the horizontal block of the building opening to the terrace on the South sections of the building. The space provided is not enough for the function of storing things. The

archives is a modification of the porch with a door linked tightly to teachers room and properly illuminated by the non-load bearing partitions around it made up of white aluminum panels to window sill and glazed to ceiling point. It is enough for the functions of keeping the records of the school, but its functional association with the principal and vice principal offices is incoherence. (See Appendix A: Form no. BCSB 10).

Case BCSB 11 (Canbulat ilkokulu) show (2) conveniences dedicated to staff and visitors' use. The two WC are enough for the functions required. The RC staircase at the South view of the building is double flight and accessible from the terrace. The staircase is painted in cream color and cladded with green coated galvanized iron burglary proofing with same color galvanized iron pipe embedded as balustrades. Although the aim for it is achieved, its placement remains criticized as mentioned previously in the analysis. The kitchenette door opens directly to a lobby from the porch; it is appropriately furnished to perform the duties of refreshment for staff/visitors and sales of snacks to pupils during break hours. Three stores are identified; two are closely linked to the reception with doors and shares a party wall with the head master office. One of the stores is layer on the subject master office. The stores are enough for storing the school's items and valuables. (See Appendix A: Form no. BCSB 11).

Case BCSB 12 (Alasya ilkokulu), shows (2) conveniences located along the porch passage, having (1) WC each for males and females and is not sufficient for the building. The kitchenette are two, the one with a door opening to the reception is for staff's Tea making while the one on the South section of the conference room with links to the canteen, services the pupils/personnel and the public when hosted on the

conference room. The canteen also opens to the conference by a door and has (1) window facing West direction. It shows (2) windows on the South walls with (1) door opening to the exterior of the building to the South direction. The daylight admitted by the windows is not enough. (See Appendix A: Form no. BCSB 12).

Case BCSB 13 (Gazi Mağusa Meslek Lisesi) has (5) females and (3) males conveniences for students and (3) for staff/visitors. The (11) WC are enough to service the easement functions of the building. The building has (2) RC double flight staircases internally placed at the East and West areas. It is enough for supporting circulation to and fro the upper floor. The kitchenette is beside the teachers room on the West-south section of the building and with (1) door opening to the lobby and in proximity to the exit door to the lobby. It services the staff and the students at the canteens during break time and distributed at the North sections towards the East staircase of the building. The students' canteen opens to the exterior space (playground) at the rear of the school while staff canteen opens to the lobby. The distance of servicing from the kitchenette to the canteens' locations is not time and energy efficient. The store by the staircase keeps all craft materials useful for the functioning of the workshop. The observation shows no designation of a window to the store, therefore denied of natural lighting. While the one on the upper floor is specifically for the keeping of computer accessories needed by the computer room. The archives connected to the principal office, accessible with a doorway on a non-load bearing brownish wooden panels partition and with (1) window each of the South and North walls directions. (See Appendix A: Form no. BCSB 13).

4.5.1.5 Building Materials and Structural System

It already been establish that the building materials and structural system of a building play a role in sustaining the physical fabric of a building. In this section, the British

school buildings selected from Famagusta will analyzed base on the following components, the wall, floor and roof.

Building Materials

The material assessment conducted for Famagusta cases (BCSB 7-14) indicates that its availability is an advantage for selection and usage. The local materials played a role in the construction of the school buildings. Although, some modern materials were incorporated to galvanize the British Enlightenment movement in the colonies' school buildings as a way of hybridizing European styles with the indigenous methods discussed in the literature. The principal materials used for British Colonial schools in Famagusta (North Cyprus) will focus on wall, floor and roof accordingly in this section. Yellow stones, wood, and glass are identified as common materials used in all the cases (BCSB 7-14) in the components defined.

Yellow stones are primarily used as wall material for cases [7 (Endustri Meslek Lisesi), 8 (Gazi ilkokulu), 12 (Alasya ilkokulu), and 14 (Sehit Huseyin Akil ilkokulu), 9 (Canbulat Özgurluk Ortaokulu) and 10 (Polatpasa ilkokulu)]. In case 11 (Canbulat ilkokulu), and 13 (Gazi Mağusa Meslek Lisesi)] cement sand screed blocks are used. Glass and wood panels are used in cases, BCSB ((Endustri Meslek Lisesi, Gazi ilkokulu, Canbulat Özgurluk Ortaokulu, Canbulat ilkokulu, Alasya ilkokulu and Gazi Mağusa Meslek Lisesi), as light partition materials agreeing to the modifications introduced by TRNC government in 1975 to meet up the functions of the schools. The tendency technically receiving 1900s modern movement materials and construction evolution. The materials for the floor in all cases assessed is concrete at all substructure

points with a combination of other finished materials from precast stones, cement sand screed and wood panels to stimulate beauty.

The roof materials used includes concrete for cases [7 (Endustri Meslek Lisesi), 9 (Canbulat Özgurluk Ortaokulu), 10 (Polatpasa ilkokulu) and 13 (Gazi Mağusa Meslek Lisesi)]. Cases 11 (Canbulat ilkokulu) combined concrete and red roof tiles. Red roof tiles also used as roof material for cases 8 (Gazi ilkokulu) and 14 (Sehit Huseyin Akil ilkokulu). While in case 12 (Alasya ilkokulu), concrete and corrugated iron sheets are used as roof covers. In cases [7 (Endustri Meslek Lisesi), and, cement sand screed is used as a flooring material. (See Appendix A: Form no. BCSB 7-14).

Structural System

In building construction sense, structural system refers to the techniques of organizing the various structural components of a building to enabling the transfer of live loads/dead loads to the ground without the structure losing it stability requirements (Barry, 1982). The field study reveals that all the cases assessed fall in the category of load bearing structural system. Focus on the cases evaluated target the building components that were visible during the physical survey exercise wall, floor, and roof.

Wall

The load bearing walls show two structural systems and massive to withstand winter seasons. Walls constructed only by yellow sand stones [case BCSB 8 (Gazi ilkokulu) and 10 (Polatpasa ilkokulu)], and walls built from the integration of sand yellow stone or cement sand screed blocks with reinforced concrete [cases BCSB 7 (Endustri Meslek Lisesi), 9 (Canbulat Özgurluk Ortaokulu), 11 (Canbulat ilkokulu), 12 (Alasya ilkokulu),

13 (Gazi Mağusa Meslek Lisesi)and 14 (Sehit Huseyin Akil ilkokulu)]. In Polatpasa ilkokulu, new decorative stones are added on the wall that constitute the focal point of the school, facing the courtyard directly with the National Flag and sculpture of their hero placed in front of it. See Figure 87.

BCSB 8

BCSB 10

BCSB 11

BCSB 12

BCSB 14

Figure 87: Wall structural systems from Famagusta cases (BCSB 8-Gazi ilkokulu , 10-Polatpasa ilkokulu 11-Canbulat ilkokulu, 12-Alasya ilkokulu and 14-Sehit Huseyin Akil ilkokulu)

Floor

A concrete slab is used in the construction of the floors with an additional topping that helps the identification and classification of the floors into two. The ones constructed from precast stones include cases BCSB [7 (Endustri Meslek Lisesi), 9 (Canbulat

Özgurluk Ortaokulu), and 10 Polatpasa ilkokulu)]. The composite floors made from precast stones (used in all cases) with any of cement sand screed or parquet is for cases BCSB [(8 Gazi ilkokulu, 11 Canbulat ilkokulu, 13 Gazi Mağusa Meslek Lisesi and 14 Sehit Huseyin Akil ilkokulu)]. The parquet floor used in Gazi ilkokulu shows an alteration to the original precast stone finish, Figure 88.

Figure 88: Floor structural systems from Famagusta cases (BCSB 7-Endustri Meslek Lisesi, 8-Gazi ilkokulu and 14-Sehit Huseyin Akil ilkokulu)

Roof

The buildings examined show roofs constructed in three roofing systems and maintaining a flat/gentle slope of approximately ($\leq 10^{o}$). The first group maintains a flat roof from RC and water proofing cover [(cases BCSB 7 Endustri Meslek Lisesi, 9 Canbulat Özgurluk Ortaokulu, 10 Polatpasa ilkokulu and 13 Gazi Mağusa Meslek Lisesi)], Figure 89.

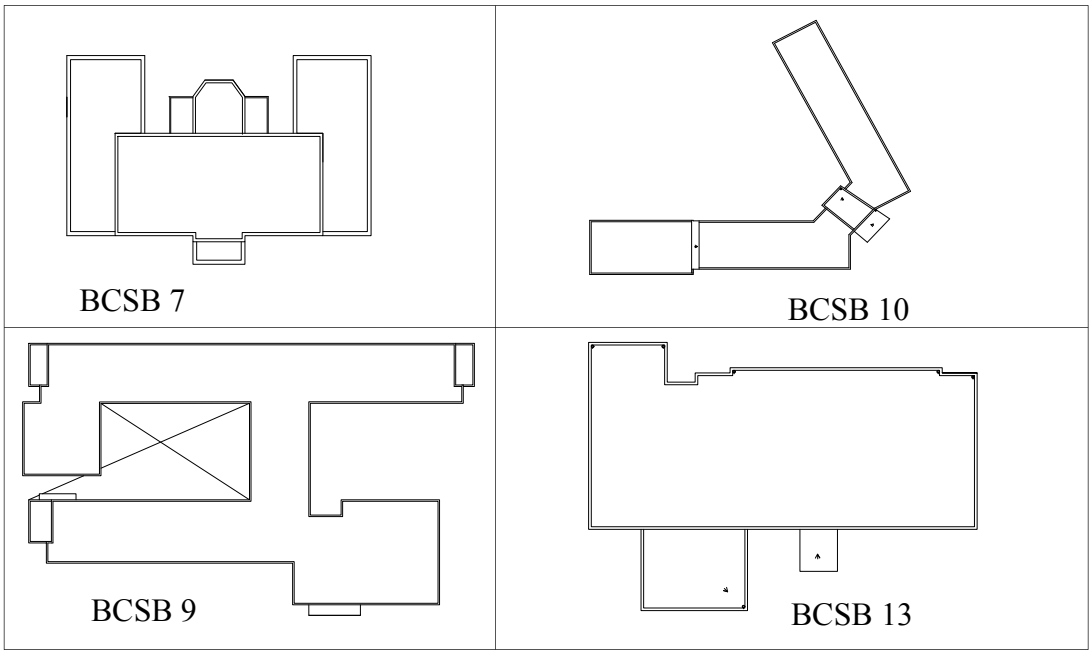


Figure 89: Flat roof system from Famagusta cases (BCSB 7- Endustri Meslek Lisesi, 9-Canbulat Özgurluk Ortaokulu, 10-Polatpasa ilkokulu and 13-Gazi Mağusa Meslek Lisesi), drawing not to scale

The second group is pitched roof of either hip or gable and with/without lean-to roofing systems made from timber trusses with red tiles [cases BCSB 8 (Gazi ilkokulu) and 14 (Sehit Huseyin Akil ilkokulu)] or iron corrugated roof sheets, Figure 90.

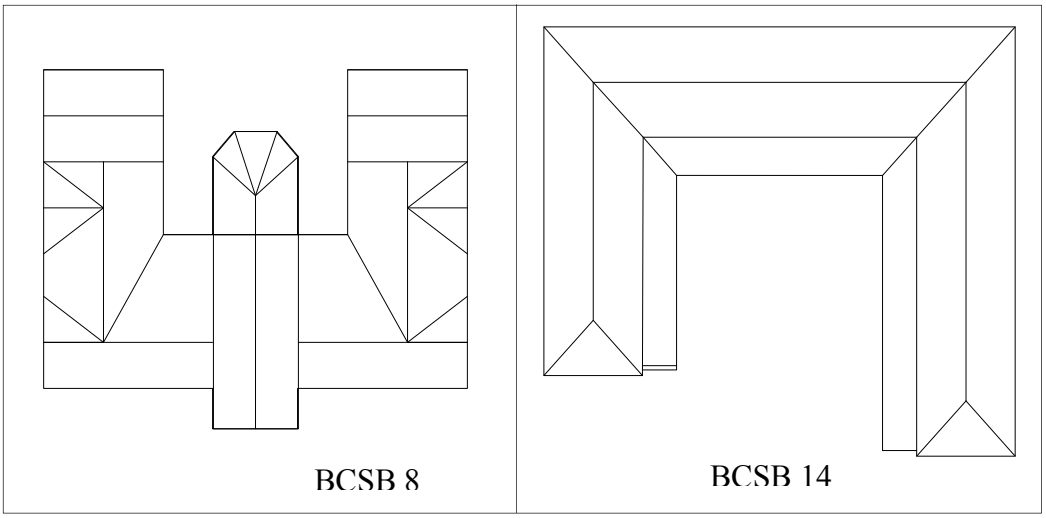


Figure 90: Pitch roof system from Famagusta cases (BCSB 8-Gazi ilkokulu and 14-Sehit Huseyin Akil ilkokulu), drawing not to scale

The third group is a combination of the two systems already described (flat and pitch), cases BCSB [11 (Canbulat ilkokulu) and 12 (Alasya ilkokulu)] falls in this category, Figure 91.

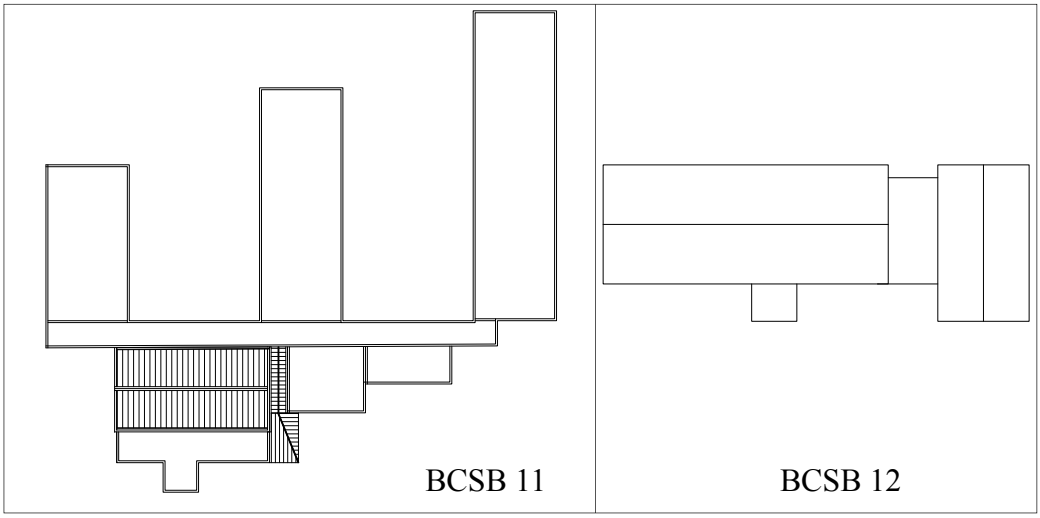


Figure 91: Combined roof system from Famagusta cases (BCSB11-Canbulat ilkokulu and 12-Alasya ilkokulu), drawing not to scale

4.6 Findings – Similarities and Differences between Colonial School Buildings in Old Calabar and Famagusta

The findings based on the criteria used architectural assessment (spatial, formal, architectural elements, functional assessment, building materials and structural system will helped to test the correlation between Colonial school buildings of Calabar and Famagusta in British Period.

Spatial organization, the cases from Calabar show only linear spatial organization. Meanwhile, Famagusta cases relay 3 types of spatial organization: Linear [BCSB 8-Gazi ilkokulu, 10-Polatpasa ilkokulu and 14-Sehit Huseyin Akil ilkokulu), linear/axial (BCSB 7-Endustri Meslek Lisesi, 9-Canbulat Özgurluk Ortaokulu, 12-Alasya ilkokulu

and 13-Gazi Mağusa Meslek Lisesi), and linear/centralized (BCSB 11-Canbulat ilkokulu). In both contexts, all spaces with the same/similar functions possess same spatial character and weight. Therefore, creating the possibility of zoning and sorting the spaces into public, semi-public/semi-private and private.

Formal organization, In Calabar, a rectangular shape is shown in the 2D formal annotation of 4 cases (BCSB 1-Duke Town Secondary School, 3-Edgerly Girls Secondary School, 5-St. Patrick College and 6-Holy Child Girls Secondary School) with 2 cases (BCSB 2-Hope Waddel Training Institution and 4-Duke Town Primary School) showing variance but the 3D formal representation show an arcaded/straight post and lintel character with pure pitch roofs of steep slope and different shapes for all the cases. In Famagusta, only 2 cases (BCSB 7-Endustri Meslek Lisesi and 8-Gazi ilkokulu) show similarity of the 2D form. Its 3D form is show straight post and lintel character with flat/gentle slope roofs, organized into 3 groups: 4 cases have flat roof shape (BCSB 7-Endustri Meslek Lisesi, 9-Canbulat Özgurluk Ortaokulu,, 10-Polatpasa ilkokulu and 13-Gazi Mağusa Meslek Lisesi), 2 cases show pitch roof shape (BCSB 8-Gazi ilkokulu and 14-Sehit Huseyin Akil ilkokulu), and 2 cases show a combination of flat/pitch shape (BCSB 11-Canbulat ilkokulu and 12-Alasya ilkokulu). The analysis also indicates that all spaces with the same functions display same form in size and height in the interior layout for both Calabar and Famagusta. Therefore, Calabar school buildings maintained a headroom of 3.0m while schools at kept at 3.6m, repetition of formal volume of spaces is a common character for both regions in British Period.

The **architectural elements** identified from Calabar cases are 4: Doors are of (wooden painted natural/black, steel coated dark gray/green and gray/red metal glazed), windows property shown are (wooden in natural/black color, green/dark gray painted

steel and gray/red metal glazed); the staircase is RC straight flight finished in gray cement color and balustrades are of precast gray/cream painted stones and galvanized iron painted in gray color. While in Famagusta, 6 elements are identified: The porch is colonnaded, RC floating canopy and RC cantilever finished with grades of yellow, white, green and red paint; the doors are wooden and painted brown, black, gray and cream, metal glazed in white, black/brown colors and white coated aluminum glazed; the windows are of metal glazed casement painted white, brown, black and green, brown coated wooden glazed (replace with white aluminum glazed); cornice is from precast white painted stones; the staircase is both RC straight and double flights painted with cream color with cream/gray precast stone slabs and the balustrades are white precast stones and black/green/gray coated galvanized iron/steel.

The **functional assessment** for the terrace that constitutes an elaborate identity in both cases studied shows a semi-open tendency. For Calabar cases, 2 types are identified, 2 cases (BCSB 2-Hope Waddel Training Institution and 3-Edgerly Girls Secondary School) show the front type that is appearing on the South direction of the building and 4 cases (BCSB 1-Duke Town Secondary School, 4-Duke Town Primary School, 5-St. Patrick College, and 6-Holy Child Girls Secondary School) represent the type that surrounds the building. While in Famagusta 3 types are identified: 3 cases (BCSB 11-Canbulat ilkokulu, 13-Gazi Mağusa Meslek Lisesi and 14-Sehit Huseyin Akil ilkokulu) conform to the front type mentioned in Calabar cases, 3 cases show the rear type situated at North direction of the building and the third type is shown by 2 cases (BCSB 9-Canbulat Özgurluk Ortaokulu, and 12-Alasya ilkokulu) which is the combined/courtyard type. In both contexts, the internal spaces keep to rectangular and square shape, sizes in each case studied vary from case to case.

For Calabar, the **building materials** used for the walls are cobble stones, sand/cement and corrugated metal sheets. The floor materials included concrete, wood and cement/sand. The roof material is corrugated iron sheets. In Famagusta, the wall materials used are sand yellow stones, concrete, wood and glass. The floor materials are concrete, wood, stones and sand/cement. The roof materials are concrete, red tiles and iron corrugated sheets.

The **structural system** for the cases studied from Calabar and Famagusta is load bearing. In Calabar, the wall system is constructed as stone walls, block walls and composite walls (made from the combination of any two or more of RC, blocks, stones and iron sheets). The floor systems are 2: Concrete floor slabs with cement sand screed and RC with wood boarding. The roof system is completely pitched roofs with slopes of ($15^{o} \geq 30^{o}$) constructed from timber and steel trusses. In Famagusta, the wall system is constructed as stone walls, blocks and RC. The floor systems are concrete slabs, RC, CSS, precast stone slabs and parquet. The roof system is flat RC, pitched roof with timber trusses and a combined system (flat and pitched systems).

The summary of the comparison between British Colonial school buildings in Calabar and Famagusta is shown in (Table 17 and 18). All numbering in brackets in the tables represents shortcut to the cases codes.

Table 17: Comparison of cases (Similarities)

Analysis criteria	Indicators	Results		Comments
		Calabar	Famagusta	
Spatial organization	P- Public, SP- Semi-public/Semi-private, P1- Private.	Linear organization – All cases.	Linear organization - 2 cases (10, 14).	Simple spatial arrangement for Calabar cases while each case in Famagusta simple, compact and rigid arrangements is used.
	Linear spatial organization is identified.			
	That is semi-public/semi-private spaces connected directly to private spaces (SP-P1).			
Formal organization	All spaces with similar functions possess the same form in the 2D representation of the cases.	All cases.	All cases.	An understanding of the climate of both regions play key role on the 3D top cover/view of the buildings.
	In the 3D form, pure pitched roof is adopted.	All cases.	2 cases (8, 14).	
Architectural Assessment	**Doors**			
	Wooden panels doors with top fixed light	2 cases (1, 2).	1 case (14).	The act of exporting materials/craftsmanship to colonies was displayed in the usage of materials/artistic themes in both contexts by British.
	Metal glazed doors.	2 cases (3, 6).	5 cases (7, 8, 9, 11, 13).	
	Metal panel door.	1 case (5).	1 case (12).	
	Pediments/pilasters surrounding doors.	4 cases (2, 4, 5, 6).	3 cases (7, 8, 14).	
	Windows			
	Metal glazed windows.	2 cases (3, 6).	All cases.	Calabar pilasters/pediments show a gray color finish while Famagusta shows varying colors.
	Pediments or pilasters surrounding window.	4 cases (2, 3, 4, 6).	All cases	
	Staircase/Balustrades			
	RC Staircase with balustrades made from stone moldings.	2 cases (2, 5).	1 case (7).	Calabar cases show symbolic motifs on the balustrades while Famagusta show plain molded balustrades
	Balustrades from metals (Galvanized pipe and steel plates).	1 case (3).	2 cases (9, 11).	

Continuation of "Table 17"

Functional Assessment	**Terrace**			In Calabar, different unit blocks handle functions in a separated manner; therefore 4 major spaces (terrace, study spaces, offices and auxiliary spaces) handle the functioning of the buildings selected. In Famagusta, an organic composition is employed, 7 major spaces (porch, terrace, reception, study spaces, offices, halls and auxiliary spaces) take-up the functioning of the buildings. Terrace is a uniform character of all the cases selected from both field study areas.
	Terrace functions as semi-public space.	All cases.	All cases.	
	'Type 1' (at the front of the building).	2 cases (2, 3).	3 cases (11, 13, 14).	
	Study spaces			
	Constitutes the primary private spaces of the buildings investigated.	All cases.	All cases.	
	Those with windows facing North and South walls.	3 cases (1, 3, 5).	2 cases (9, 11).	
	The ones with windows facing three or all directions.	3 cases (2, 4, 6).	5 cases (7, 8, 10, 13, 14).	
	Offices			
	Offices windows facing three or all directions.	2 cases (1, 2).	6 cases (7, 8, 9, 10, 12, 13).	
	Auxiliary Spaces			
	Double flight staircase design.	1 case (5).	3 cases (7, 11, 13).	
Building Materials/ Structural system	**Materials**			An extent of the original materials of the buildings stands to present times although in some cases new materials had been introduced in the renovation works implemented. However, following the scope of this study, detail evaluation of the changes (alterations) are not adequately compiled. The structural system of the buildings of the two regions is load-bearing.
	Wall - Stones	2 cases (2, 4).	6 cases (7, 8, 9, 10, 12, 14).	
	- CS	4 cases (1, 3, 5, 6).	2 cases (11, 13).	
	Floor - Wood	2 cases (2, 5).	3 cases (8, 11, 13).	
	- Concrete	All cases.	Used in all cases.	
	Roof – Iron corrugated sheets	Used in all cases	1 case (12).	
	Structural			
	Wall			
	- Stone walls	2 cases (2, 4).	6 cases (7, 8, 9, 10, 12, 14).	
	- block walls	2 cases (1, 6).	1 case (11).	
	- RC with blocks	1 case (3, 5)	2 cases (11, 13).	
	Floor			
	- Concrete slab with CSS	All cases.	1 case (14)	
	- Concrete slab with wooden boards	2 cases (2, 5)	3 cases (8, 11, 13).	
	Roof -Pitched roof with gable, hip and lean-to attached and in timber structure.	4 cases (3, 4, 5 6).	2 cases (8, 14).	

Table 18: Comparison of cases (Differences)

Analysis criteria	Calabar	Famagusta	Comments
Spatial organization	Only Linear organization	Two spatial types associated include: -Linear and axial spatial organization -4 cases (7, 9, 12, 13). -Linear and centralized –1 case (11).	Singular units for functions resulted in the simplicity of spatial and formal organizations in Calabar cases. Famagusta cases are comprehensive, giving rise to a combination of other spatial dimensions and complex forms.
Formal organization	Three forms are represented in the 2D of the cases. 	The 2D forms vary with case (7, 8) showing 80% similarity. 	
	Only steep slope (15° - 30°) pitch roof shapes are shown in all cases. Facades show arcaded/straight character in the 3D.	The 3D form exhibits flat roof in 4 cases (7, 9, 10, 13). All facades show straight post and lintel character in 3D. An integration of flat roof and pitched roof with gentle slope (less or equal to 10°) shapes in the 3D form- 2 cases (11, 12).	
Architectural elements	**Porch**		The design patterns of the elements of both regions' school buildings attracted more details and attention and taking reference from history on stylistic approaches of inviting public perception and meanings to facades that faces main streets. As a public remedy to filling the gap between historic architecture and modern architecture.
	No porch in all cases.	Applicable in all cases except case (14).	
	Doors		
	Wooden wedged door use in 1 case (1).	No wedge door	
	No wooden glazed door.	Wooden glazed door use in 1 case (7).	
	No metal bars door	Metal bars door shown in one case (10).	
	2 proportions of doors shown: - Single leaf-3 cases (1, 2, 5). - Double leaf-4 cases (3, 4, 5, 6).	3 proportions of doors shown: -Single leaf-4 cases (9, 10, 11,12). -Double leaf-3 cases (7, 8, 14). -Double leaf +side couple windows-2 cases (9,13).	

Continuation of "Table 18"

	Windows		
	5 windows show similar proportion in size but have different design (1, 3, 4, 5, 6).	Windows proportion are generally sort into 3 three patterns by design.	
	Wooden /metal panels windows shown (1, 2) and (4, 5).	Not used.	
	Cornice		
	No cornice.	Cornice used in 2 cases (8, 14).	
	Staircase/Balustrades		
	Metal sheets are not used.	Metal sheets are used in 1 case (9).	
Functional assessment	**Porch**		Early British Period influenced the layout of school buildings in Famagusta marking the transition period from other Colonial Masters and shows total control of the pupils' life in the buildings but the late period influences were focused on more of liberalism with the rising of enlighten people from the colonies. This influences show in the openness nature of some cases especially in Calabar.
	Porch not part of the cases.	Porch is incorporated in 7 cases defining the major entrance points (7, 8, 9, 10, 11, 12, 13).	
	Terrace		
	Terrace surrounding entire building is in 4 cases (1, 4, 5, 6).	-Terrace at the rear part of the building spotted in 3 cases (7, 8, 10). -The Courtyard combined with front/rear types shown by 2 cases (9, 12).	
	Study spaces		
	East and West windows facing is not used.	East and West window facing is only applicable with 1 case (12).	
	Offices		
	-Show windows facing North direction in 1 case (4). -Windows facing North and South directions is shown by 2 cases (5, 6).	- 1 case depicts windows facing East and West directions (14). -1 case has windows facing South and East directions (11).	
	Hall		
	Not in the selected buildings.	Conference Hall is in 2 cases (9, 12).	

Continuation of “Table 18”

	Auxiliary Spaces		
	2 cases show straight flight staircase design (2, 3).	1 case shows a combination of straight / double staircase designs (9).	
	All cases do not possess conveniences embedded organically.	Apart from 1 case (14), all others have Conveniences included.	
Materials	Cobble stones used in 2 cases (2, 4).	Yellow sand stones used in 4 cases (7, 8, 12, 14).	Local materials were combined with modern materials to infuse the differences of time. In this way, the historic urban quarters with the surrounding environment are competitively kept alive. Walls proportion and slope of roofs were constructed to respond to the climate of regions considered.
	Roof tiles are not used.	Roof tiles are used in 3 cases (8, 11, 14).	
Structural System	**Walls**		
	Slender walls are use.	Massive walls are use.	
	Floor		
	No precast stone floor.	All cases have a touch of precast stones flooring.	
	Roof		
	Hip roof in steel truss system used in 1 case (2).	-Flat roof with RC system used in 4 cases (7, 9, 10, 13). -Combination of flat system with pitched gable system (timber) used 2 cases (11, 12).	

From (Table 17 and 18), it is satisfying to state that Colonial school buildings in Calabar and Famagusta in British Period show similarities and differences at various levels of the analysis depending on the criteria used to generate the results. The ideology of integrating local and modern methods was employed and displayed in the buildings. Reasonably speaking, British Colonial school buildings' show context sensitivity evidence on the materials used for their construction and the proportion facade openings.. The findings also reveal that more attention was dedicated to the overall array of the buildings from Famagusta than Calabar in terms of the architectural, material and structural systems character shown by the buildings . The reasons are tailored on the complex nature of the climate and maximizing the available land space allotted. Compact design approach is expressed in Famagusta cases while in Calabar a segmented design approach is used to service the whole functioning of the schools thereby giving room for singularity of blocks maintaining a unit function.

4.7 Conclusion of Chapter

The physical analysis conducted reveals that British colonial school buildings in Calabar and Famagusta embody the characteristics summarized as followed. All the cases analyzed from Calabar shows linear spatial organization. Spaces with the same/similar functions possess same spatial character and weight and closely connected. In Calabar, 4 cases show a rectangular form in the 2D formal organization with 2 cases showing a slight variations but the 3D formal organization show a pure pitch roof shape for all the cases. All spaces with the same functions display same form in size and height. The functional assessment for Calabar cases agree with the box philosophy of British Colonial Architecture and show the terraces (portico's) in semi-open character forming the core for stimulating the functioning of other spaces. Four architectural elements are identified from Calabar cases: doors of wooden and metal surrounded by

decorative moldings, windows are wooden and metal glazed delineated with pediments/pilasters, staircase is RC straight flight and balustrades are of precast stone moldings/galvanized iron. In Calabar, the wall materials used are cobble stones, cement sand blocks and iron corrugated sheets. Concrete and sand cement, wood are used as floor materials. Roof material is basically iron corrugated sheets. The structural system is load bearing. The wall system construction is stones, blocks and composite walls (RC, blocks, stones and iron sheets). Floor systems are 2 types: Concrete with CSS and RC with wood boarding. The roof system is pitched type in the form of gambrel, hip, gable and lean-to constructed by steel/timber trusses.

Famagusta cases show 3 types of spatial organization: Linear shown by (3) cases, axial/linear shown (4) cases and linear/centralized shown by (1) case. The spatial behavior of repeating spaces with similar functions is also implemented with peculiarity to zoning them. Only 2 cases in Famagusta show similarity in the 2D form. The 3D form falls into: 4 showing flat roof shape, 2 cases with pitch roof shape and 2 cases show an integration of flat with pitch shapes. The repetition of formal volume is applied in all cases in Famagusta. The portico character mentioned in Calabar cases is also maintained in Famagusta with 3 approaches and it functions are complemented by the addition of the porch and reception. A total of 6 architectural elements are identified from Famagusta cases: porch showing a colonnaded character, floating RC canopies and RC cantilever, doors are of [wooden, metal glazed and aluminum (new description)], windows are metal glazed casement, [wooden glazed and (aluminum glazing)], staircase shown is RC straight flight and double flight with semi-circular steps. The wall materials for Famagusta cases included yellow sand stones with concrete, wood and glass. The floor materials are concrete, stones, cement/sand and

wood. The roof materials are concrete, roof tiles and iron corrugated sheets. The structural system used for Famagusta cases is load bearing, stones, blocks and RC characterized the wall system. The floor system is constructed of concrete, CSS, precast stone slabs and parquet. Three roof systems are used: RC flat roofs, pitched roofs of (gable, hip and lean-to) supported by timber trusses and a combined roof system of (RC flat and pitched). The three core determinants evaluated so far, provide the yardstick for ascertaining the similarities and differences between them in that age. The said goal of the thesis, sequentially elaborated in the final Chapter following.

Chapter 5

CONCLUSION

5.1 Introduction

As a recap, this thesis focuses on comparative study of British Colonial school buildings in Old Calabar and Famagusta. To realize the core intentions outlined, the main research question remains: What are the similarities and differences of British Colonial school buildings in Calabar and Famagusta?

The sub-research questions are:

1) What is British Colonial Architecture?
2) What are the general characteristics of British Colonial Architecture?
3) What are impacts of British Colonial Period in Calabar and Famagusta?

The methods for answering the above aims and objectives is through adequate literature review of the keywords of the thesis title, Case study via data collection, selection and analysis and the techniques for the findings/suggestion through, observation, elite interviews, tables and comments. The entire study comprise 5 chapters. The scope of the research was retrospectively explained in chapter 1. British Colonial Architecture and Colonial schools were discuss in chapter 2. While British Colonization Period in Calabar and Famagusta was handle in chapter 3. The analysis of the cases selected from both contexts were explored in chapter 4 through their architectural assessment (spatial organization, formal organization, architectural elements and functional assessment, building materials and structural systems). The stated criteria fostered the

comparison (similarities and differences) of the school buildings of Calabar and Famagusta in British Regency. The thesis is concluded in chapter 5.

The possibility for concluding the thesis anchors on the results analyzed. The theoretical review phase provided the pedestal from historical perspective to understand the common grounds and variations between Calabar, Nigeria and Famagusta, North Cyprus in British Period. British Colonial Architecture is rooted on repetition/symmetry of spatial and formal qualities and proportion of facade elements, resulting in the box character as a common factor in both domestic and administrative buildings' architecture. They also leverage on the architectural styles of the 1800s. Colonial schools as part of their Imperial tool also followed simplicity of spatial and formal structure since training was basically elementary before the modifications that were engineered by the social needs and demographic growth of colonies.

The study also informs that British presence started in Old Calabar, Nigeria 1885 and Famagusta, North Cyprus 1878 but ended in 1960 in both regions. Nigeria was made a Protectorate while Cyprus was a Crown Colony. The planning laws and educational systems of both contexts were developed and patterned after the colonizer's country planning ordinances and provided the bedrock for improvements after independence. Three educational systems were approved for Nigeria base on regional sensitivity but operated a common educational system for North Cyprus. British physical impacts were enforce in the construction of governmental, religious, storage buildings and housing. The making of English language as an official language and the introduction of recreational facilities were social impacts they inculcated in the colonies. The urban infrastructures were in development of post offices, health centers, army

barracks/police stations and others, helped initiate their Colonial Agenda and at the same time improved the living conditions of the settlements. The commerce facilities constructed supported the economic development of the study areas to present day. British Colonial Architecture influence on both regions indicates two phenomena: The hybridization of local with European styles and a technical shift to modern architecture.

British Colonial school buildings in Calabar and Famagusta embody the characteristics summarized as followed. All cases show linear organization as a uniform property. Although, Famagusta cases show 2 additional (axial and centralized) synthesized with linear. The formal character of Calabar cases is dominated by rectangular shape but Famagusta cases show variations in all exception of 2 cases that show close similarity. The 3D view of Calabar cases show steep pitch roof shapes and arcaded/straight facades while Famagusta cases show flat/gentle roof slopes and straight post and lintel facades All cases with the same functions possess similar spatial and formal qualities. The terrace with arcades is a common character incorporated in all selected cases of both regions. Ornamentation themes are attached to doors and windows of both settings but with varying design. Stones, sand, wood, cement, concrete and iron are the building materials that characterize the school buildings. The structural system shown is load-bearing: The wall systems are stone/block walls, the floor systems are concrete slab/wood covering and the roof systems are RC and timber/steel.

Similarly, Colonial school buildings stands and possess uniqueness in the physical fabric and distinctive socioeconomic values that undoubtedly stamp the urban environment as heritage icons. Based on these affinities and characteristics captured through the chapters of the study, this thesis timely offers comparative study of the

school buildings of British Colonial Period as a primary approach of selecting their physical qualities to attracting the need for safeguarding their life-cycle for present and future benefits of the society. Consequentially, provides an opening for further research and registering them with the Planning Authorities of the two settings considered.

5.2 Further Research

The timely nature of the study anchors on comparing the Colonial school buildings selected from Calabar and Famagusta due to their significance. Furthermore, uncover them to receiving intervention approaches whose change (alterations) should not freeze their values in the course of time. Considerably, we have seen that no community will be willing to support the loss of such cultural monuments. The background provided, engenders futuristic intentions for further research on the cases considered at both public and private sector levels. Concurrently, targeting the students to take up the challenge of using this document to effect a purposeful change with time as it relate to conservation discourses. It is also noticeable that sections of the physical fabric of the school buildings are dilapidated with time as evidenced by the photographs, demanding an immediate attention for assessing the impacts of decay on the school buildings to avert near obsolescence. The measure of alterations in the schools and the influence of British Colonial school Architecture on both new public and private schools of the regions should be considered. Sequentially, such findings will serve as complement to the position assumed by this study. Likewise, soliciting with the Planning Authorities of the two localities, to grant the building approvals of the cases documented as a strategy for creating and attracting public/private awareness and involvement.

REFERENCES

Aghalino, S. O. (2004). Notes on the Economic impact of Colonial Rule on the Isoko People of the Western Niger Delta Region of Nigeria, 1900-1960. *Ilorin Journal of Humanities (ALORE),*14(11).161-179.

Ahmad, A. G. (1997). *British colonial architecture in Malaysia 1800-1930*. Museum Association of Malaysia.

Ajekigbe, P. G. (1997). Some notes on the Architectural History: Calabar from the Pre-colonial period to the present. *West African Journal of Archaeology.* 27(2), 132-143.

Akpan, E. O., & Violettam I. E. (1988). *The Women's War of 1929: Preliminary Study.* Calabar: Government Printer.

Alcock, J. (2014). *Historical Atlas of British Empire and Commonwealth.*

Bah-Diallo, A. (1997). International Seminar on basic Education and Development Assistance in Sub-Saharan African. *Japan International Cooperation Agency.* 3-26.

Ballantyne, A. (Ed.). (2005). *Architecture theory: a reader in philosophy and culture.* A&C Black. Library of Congress Cataloging in Publication Data.

Bassey, N. (1986). The Architecture of Old Calabar: *Paper Presented at an International Seminar on the Story of Old Calabar.*

BBC. (2014, April 18). *History of British Empire*. Magnificent Library.

Beckett, G.W.(2013). *British Colonial Investment in Colonial N.S.W. 1788-1850.* Singapore: Trafford Publishing.

Bergdoll, B. (2000). *European Architecture 1750-1890.* Oxford: Oxford University Press.

Bhabha, M. (1990). *The Nation as an Ambivalent Construction of "A Nation"*. New York: Routledge & Keegan Paul.

Bluemenson, J. G. (1978). *Ontario Architecture*: *A Guide to Styles and Terms, 1784 to the present.* Ontario: Fitzhenry & Whiteside.

Braide, T., & Ekpo, I. V. (1986). Notes on the Preservation of the Vanishıng Monuments of Old Calabar: *Paper Presented at Seminar 'The Story of Old Calabar'. National Museum. Old Residency, Calabar.*

Brooker, G., & Stones. (2007). *Basics of Interior Architecture: From Structure.* Switzerland: AVA Publishing SA.

Calotychos, V. (1998) (Ed.). *Cyprus and its People: Nation, Identity and Experience in an Unimaginable Community 1955-1997.* Boulder, CO: West View.

Carmona, M. (2003). *Public Space, Urban Space.* Oxford University.

Cheek, R. (2006). *From Guiding Lights to Beacons for Business: The many lives of the Maine's Light houses Boston:* Historic New England.

Ching, F. D. K. (2007). *Architecture: Form, Space, and Order.* New York: John Wiley & Sons, Inc.

Chipkin, M.C [review by Demissie, F. (1997)]. Representative Architecture in South Africa Reviewed Work: Johannes Burg style: Architecture and Society 1880s -1990s by Clive M. Chipkin. *The International Journal of Africa History Studies.* Boston University African Studies. 30 (2), 349-355.

Christodonlou, D. (1959). The Evolution of the Rural Land Use Pattern in Cyprus. *World Land Use Survey, Regional Monograph.* 2. Bude: Geographical Publications.

Chun, H. K., & Noordin, N. M. (2005). An influence of colonial architecture to building styles and motifs in colonial cities in Malaysia. *8th International Conference of the Asian Planning Schools Association*.

Cox, J. (2003). *A History of Colonial Heights School 1.* Boulevard: Colonial Patriot.

Crain, E. E. (1994). *Historic architecture in the Caribbean islands.* University Press of Florida.

Craven, J. (2015). *Guide to Colonial American House Styles, 1600-1800.*

Crisman, P. (2007). *Whole Building Design Guide: Form.* Washington DC: National Institute of Building Services, University of Virginia School of Architecture.

Cummings, A. L. (1967). *Architecture in Early New England.* Mass older Sturbridge Village: Sturbridge.

Curl, J. S. (1992). *Encyclopedia of Architectural Terms.* Oxford: Donhead Publishing Ltd. 128.

Cyprus Today (October-December 2013). 4.

Darke, D. (2006). *North Cyprus: The Bradt Travel Guide.* Updated by Nigel Wallis. UK: Bradt Travel Guides Ltd.

Dick, S., & Allingham, H. P. (1909). The cottage Homes of England. *HelenGreen.* www.English-cottage-lifestyle.com.

Duke II, J. (2010). The Impact of Colonialism on the Development of Management in Nigeria. *International Journal of Business and Management*. 5(8), 66-75.

Dupraz, Y. (2013). *British and French Colonial Education in Africa: A Discontinuity Analysis at the Border between French and English Speaking Cameroon Preliminary.*www.ise.ac.uk/economichistory/seminars/eh590workshop/eh590h2014/dupraz.pdf.

Ebai, S. E. (2009). The right to self-determination and the anglophone Cameroon situation. *The International Journal of Human Rights,* 13(5), 631-653.

Efthimiou, I. (2003). *Development of Water Resources in Cyprus: A Historical Review.* Press and Information Office, Republic of Cyprus for Water Development Department.

Ekeh, P. (1997). Historical Maps of Regions and States of Nigeria. *Wiberforce Conference on Nigerian Federalism.*

Eni, D., & Abua, C. (2014). The Impact of Urban Renewal on Quality of Life (QOL) in Calabar, Nigeria. *Research on Humanities and Social Sciences,* 4(17), 129-135.

Erim, E. O. (2012). *The Early History of the People of the Upper Cross River* in S.O. Jaja et al (Eds). *History and Culture of the Upper Cross River.* Enugu : Harris Publishers.

Erim, P. O., & Imbua, D. L. (2012). Women in the Colonial Economy of Cross River Area of Nigeria, 1900-1950. *Journal of Social Sciences.* 30(2), 171-181.

Etowa (2014;Oct 28). *How we supply water to all parts of Cross River.* Niger Delta: Independent Newspapers Limited.

Fabumi, M. (2005). History Analysis of Educational Policy Formulation in Nigeria: Implications for Educational Planning and Policy. *International Journal of African American Studies.* 4(2), 1-7.

Fafunwa, A. B. (2004). *History of Education in Nigeria.* Ibadan: Educational Publishers Ltd.

Falola, T., & Amanda W. (2007). *Encyclopedia of middle Passage: Greenwood Milestones in African American History.* Greenwood Publishing Group.

Farber, J. C., & Reed, H. H. (1980). P*alladio's architecture and its influence: a photographic guide.* New York: Dover Publications.

Fieldhouse, D. K. (1966). *The colonial empires: a comparative survey from the eighteenth century*. New York, NY: Weidenfeld & Nicolson.(p. 265).

Firestone, W. E. (2010). *Grandeur and Grace in the building of America from Ground up, 1784-1860.*Ohio:Red Eft Media.

Gelbrich, J. (1999). *American Education.* Oregon State School of Education.

Georghallides, G. S. (1979). *A Political and Administrative History of Cyprus 1918 – 1926.* Nicosia.

Given, M. (2004). Maps, Fields and Boundary Cairns: Demarcation and Resistance in Colonial Cyprus. *International Journal of Historical Archaeology.* 6(1), 1-22.

Goldie, H. (1901). *Calabar and its Mission.* Toronto: The Library of Victoria University.

Gomez, B. T., Basu, C., & Mcnair, R. E. (2001). *Cities of Dream: Examining the Ideology of Colonial Architecture in India.* 2-4.

Grace (2011, march 1). 11 Elements of British Colonial Décor in India Sense and Simplicity. *Gracie-sense and Simplicity*.

Graves, B. (1998). *Signs Taken for Wonders-Hybridity and Resistance.* Rhode Island: Brown University.

Green, M. A. (1904). *The eighteenth century architecture of Bath.* G. Gregory.

Gullick, J. M. (2000). *A History of Kuala Lumpur 1856 – 1939.* Selangor: MBRAS. 18-20, 45-48, 312-321.

Gursory, K., & Smith, L.N. (2006). *North Cyprus: Landmark Visitors Guide.* England: Landmark Publishing Ltd.

Hallinan, C. (2006). *Encyclopedia.* London : Google Technology Inc.

Harmon, R. B. (1983). The Colonial Revival in American Architecture. *Monticello*: *Vance Bibliographies.* 3.

Harris, C. M. (1983). *Illustrated Dictionary of Historic Architecture.* New York: Dover Publications Inc. 178, 243,249.

Heritage of Malaysia Trust. (1990). *A Handbook of Malaysian Architectural Heritage Survey.* Kuala Lumpur: Badan Warisan Malaysia. 24-23.

Holland, R. (1998). *Britain and Revolt in Cyprus 1954-1989.* Oxford.

Holme, C. (Ed.). (1907). *Old English country cottages* (Vol. 13). Offices of the Studio.

Hook, G.R. (2009). *Britons in Cyprus, 1878-1914.* The University of Texas at Austin. Ph.D. Thesis.

Hungwe, B. (2013, 16 may). *Zimbabwe's Surprising bid to preserve its Colonial past. BBC* News.

Imam, H. (2012). Educational Policy in Nigeria from Colonial Era to Post-Independence period. *Italian Journal of Sociology of Education.* 4 (1), 181-204.

Imbua, D. L. (2013). Robbing Others to Pay Mary Slessor: Unearthening the Authentic Heroes and Heroines of the Abolition of Twin killing in Calabar. *Africa Economic History.* 41.139-158.

Inyang, A. A., & Bassey, M. E. (2014). Imperial Treaties and the Origins of British Colonial Rule in Southern Nigeria, 1860-1890. *Mediterranean Journal of Social Sciences.* 5(20), 1946.

Jackson, A. (2006). *The British Empire and the Second World War.* London & New York: Hambledon Continuum.

Keister, D. (2007). *Storybook Style: Take a world tour of a beloved cottage architecture.* Cottage and Bungalows.

Kent, R. (2003). A Heritage in Ruins*:* The Maintenance and Preservation of Ruined Monuments. *The Building Conservation Directory.*

Kotsila, P. (2010). *The Socio-environmental History of water development and Management in the Republic of Cyprus.* Msc Thesis (published). Universitat Autonoma de Barcelona and The Cyprus Institute, Nicosia, Cyprus.

Lange, M., Mahoney, J., & Vom Hau, M. (2006). Colonialism and Development: A Comparative Analysis of Spanish and British Colonies. *American Journal of Sociology.* 111(5), 1412-1462.

Latham, A. J. H. (1973). *The Impact of the International Economy upon a Traditional Society.* Oxford: The Clarendon Press. 193.

Lester, W. (1996). *American Shelter: An Illustrated Encyclopedia of the American Home.* 41, 92.

Livingstone, W. P. (1917). *Mary Slessor of Calabar: pioneer missionary.* New York: Doubleday Doreen.

Loomba, A. (2005). *Colonialism/Post colonialism.* London and New York: Routledge Taylor & Francis Group.

Lossing, B. J. (1912). *Harpier's Encyclopedia of United States History.*10. New York: Harper and Brothers.

Lugard, L. F. J. (2013). *The dual mandate in British tropical Africa.* Routledge.141-145.

Media Center (2014). *British Colonial Heritage and Architectural Marvel.* Ministry of Tourism, Malaysia.

Melvin, J. (2005). *Isms: Understandıng Architecture.* Australia: Bloomsbury Acad & Prof. 6-7.

Ministry of Education and Culture (2003). *The Development of Education: National Report of Cyprus.* Nicosia: International Bureau for Education.

Nair, K. K. (1972). *Politics and Society in South Eastern Nigeria, 1841-1906: A Study of Power, Diplomacy and Commerce in Calabar.* Evanston: Northwestern University Press.

Nangi, A. (2014). *British Colonial Architecture: Towns, Cantonments and Bungalows.* Retrieved from , www.boloji.com/index ‘cfm?md=Content&sd= Article & ID=1008.

National Commission for Museums and Monuments (1986). *The Story of Old Calabar.* Calabar: Old Residency.

Newham, C. F. (1905). *The System of Education in Cyprus. Board of Education.* London: Reports on Educational Subjects.

Newman, P. (1953:200-210). *A Short History of Cyprus.* The University of Michigan: Longmans & Green.

NITP (1991). Twenty five years of Physical Planning in Nigeria. *Silver Jubilee Anniversary Bulletin Published by NITP Silver Jubilee Publications Committee, Nigeria.*

Norberg-Schulz, C. (1975). *Meaning in Western Architecture.* London & New York: Rizzoli International Publications Inc. 10-12.

Norberg-Schulz, C. (1979). *Genius Loci: Towards a Phenomenology of Architecture.* New York*:* Rizzoli International Publications Inc. 50.

North Cyprus Online. (2001-2014). *History of Famagusta.*

Nwankwo, G. O. (1980). *The Nigerian Financial System.* London &New York: Macmillan, Africana Publications Co.

Ocheni, S., & Nwankwo, B. C. (2012). Analysis of colonialism and its impact in Africa. *Cross-Cultural Communication.* 8(3), 46-54.

Odukoya, D. (2009). Formulation and Implementation of Educational Policies in Nigeria. *Educational Research Network for West and Central Africa (ERNCAWAS).*

Ola, C. S. (1984). *Town and Country Planning and Environmental Lands in Nigeria.* Oxford University Press.

Omole, F. K., & Akinbamijo, O. B. (2012). Land Development and Planning in Nigeria: The Historical Account. *Journal of Law, Policy and Globalization.*8, 25-31.

Onal, S., Dagl, U., & Doratli, N. (1999). The Urban Problems of Gazimagusa (Famagusta) and Proposals for the future. *Cities. [Pergamon, Elsevier Science Ltd]*. 16 (5), 333-351.

Orr, C. W. J. (1972). *Cyprus under British Rule.* London: Zeno Publishers.

Özgüven, B. (2004). From Ottoman Province to the Colony: Late Ottoman Educational Buildings in Nicosia. *METU JFA.* 1-2 (21), 33-36.

Ozigi, A., & Ocho, L. (1981). Education in Northern Nigeria Review by Stock. R.F. (1983). *African Journal of International African Institute, Cambridge University Press*. 53(3), 105-106.

Papadakis, Y. (2008). *Education in Divided Cyprus: A Comparison of Greek and Turkish Cypriot School books on the History of Cyprus.*

Perring, D. (2002) . *The Roman House in Britain.* USA and Canada: Routledge.

Persianis, P. (1978). *Church and State in Cyprus Education.* Nicosia.

Pile, J. (1990:84). *The Dictionary of 20th- Century Design.* New York: Da Capo Press, Inc.

Phohaides, P. (2004). *Architecture and Modernity in Cyprus.* From www.academia.edu/4987823.

Picton-Seymour, D. (1977). *Victorian Buildings in South Africa*. Cape Town: Balkema.

Prucnal-Ogunsote, B. (2001). Classification of Nigerian Architecture. *Journal of the Association of Architectural Educators in Nigeria (AACHESJ)*. 1(6), 48-56.

Sabri, R. (2014). Transitions in the ottoman Waqf's Traditional Building upkeep and Maintenance system in Cyprus during the British Colonial era (1878-1960) and the Emergence of Selective Architectural Conservation Practices. *International Journal of Heritage Studies. Doi:10.1080/135258.2014.968604.*

Scalzo, J. (2000). *Street architecture, nineteenth-century urban buildings and the British architectural profession.* Ph.D Thesis (Published). University of Toronto, Graduate Department of History and Arts.

Sonyel, S. R. (2003). *The Destruction of a Republic and its aftermath.* Lefkosia: CYREP.

Stefan (2012, July 13). *A Tale of Two Islands. International Travel and Health Insurance Journal.* Bristol: Voyageur Publishing and Events.

Sulaiman, F. R. (2012). Internationalization in Education: The British Colonial Policies on Education in Nigeria 1882-1926. *Journal of Sociological Research.* 3(2). Doi: 10.5296/jsr/v3i2.2222.

Taiwo, C. O. (1980). *The Nigerian Educational System.* Lagos: Thomas Nelson Nigeria Limited.

Theobald, P. (2010). Small Wonder: The Little Red School House in History and Memory by Jonathan Zimmerman. *History of Education Quarterly.* 50: 426-428. *Doi:10.1111/j.1748-5959.2010.00288.x.*

Tickly. L. (2001). Globalization and Education in the Postcolonial World; towards a conceptual Framework. *Comparative Education.* 37(2), 151-171.

Tiesdell, S., Oc, T & Heath, T. (1996:18). *Revitalizing Historic Urban Quarters.* Oxford: Architectural Press.

Tinniswood, A. (2011, March 29). *A History of British Architecture.* BBC News.

Tofallis, K. (2002). *A History of Cyprus: From the Ancient Times to the Present.* London: The Greek Institute.

Tuan, Y. F. (1977). *Space and place: The perspective of experience.* University of Minnesota Press.

Ukpong, O. (2012). A Brief History of the Efik. Detroit: *The Efik National Association USA Inc.*

UNESCO (2000). *'Heritage: A Gift from the Past to the Future', part of the mission statement of the World Heritage Center.* Paris: UNESCO.

Varnava, A. (2005). Recreating rural Britain and Maintaining Britishness in the Mediterranean: The Troodos Hill Station in Early British Cyprus. *The Cyprus Review, University of Nicosia*. 17(2), 47-79.

Varol, G. (2013). *Identification of Bungalow Houses in North Cyprus.* MSc Thesis (Repository). Gazimagusa: Eastern Mediterranean University.

Von Meiss, P. (1996). *Elements of Architecture, From Form to Space.* London: E & FN Spon.

Watkin, D. (2005). *A History of Western Architecture.* London: Laurence King.

WDD (2003). The Development of Water Resources in Cyprus. A Historical Review Nicosia, Cyprus. *Ministry of Agriculture, National Resources and the Environment (MANRE).*

Wings (2012, September 1). Discover Cross River. *Voyager Media.* Issue 12.

Winter, R. (1996). *American Bungalow Style.* New York: Simon & Schuster.

Wood, B. (06, June 2015). 15 of Shoreditch's Anchors and Innovators. T*he spaces News retrieved from thespaces.com*

Ziltener, P., & Künzler, D. (2003). Impacts of Colonialism–A Research Survey. A Research Survey. *American Sociological Association.* 19(2):290-311.

URL, 1: http://cookit.

URL, 2: http://www.heritagetourismindia.com/#

URL, 3: www.flickr.com

URL, 4: http://architecture.about.com

URL, 5: http://www.calbungalow.com

URL, 6: http://archiseek.com

URL, 7: http://creativecommons.org

URL, 8: http://allikypros.wordpress.com

APPENDIX

Appendix A: Inventory Forms

INVENTORY FORM: BRITISH COLONIAL SCHOOL BUILDINGS IN CALABAR (NIGERIA)

Inventory No	BCSB1	Street	Anderson Street	Date	01.04.2015

HISTORICAL INFORMATION

Name	Duke Town Secondary	Construction Year	1846	Owner	Roman Catholic Church
School Type	Secondary	Current Use	JSS1/Staff Block		

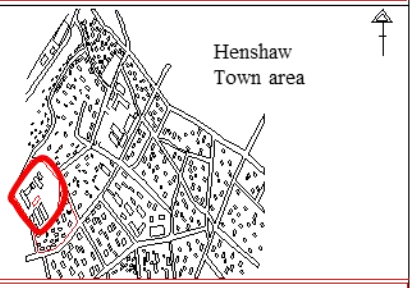
BUILDING CHARACTERISTICS

Size	195.1m²	Materials	Wall: CS blocks+ Iron sheets Floor: Concrete+ CS Roof: Iron corrugated sheets	Construction Technique	Wall: Blocks Floor: Concrete slab Roof: Timber
No of Floors	1				

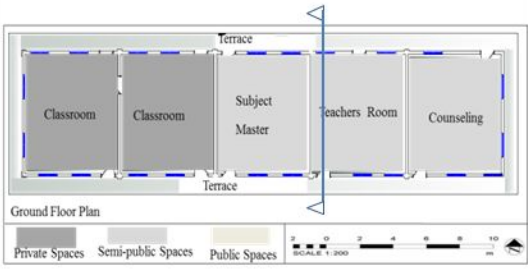
VALUES

Historical	X	Aesthetic		Economic	X	Educational	X
Social	X	Religious	X	Environmental	X	Architectural	

LOCATION MAP

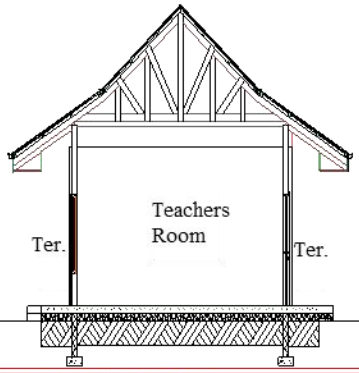


PLAN

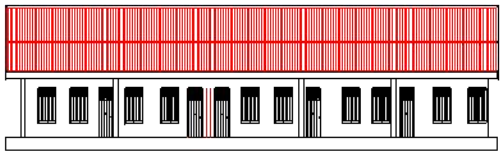


ROOF PLAN

SECTION

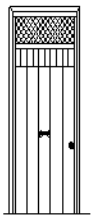


ELEVATION



PHOTO

ARCHITECTURAL ELEMENTS

PORCH	DOORS	WINDOWS	CORNICE	STAIRCASE/BALUSTRADES
				
	Door material: Wooden Color: Black	Window material: Wooden Color: Black		

RC-Reinforced Concrete; CSS-Cement Sand Screed

Researcher's Name: Ejeng Ukabi, MS Arch. EMU, North Cyprus

INVENTORY FORM BRITISH COLONIAL SCHOOL BUILDINGS IN CALABAR (NIGERIA)

Inventory No	BCSB 2	Street	Leopard Road	Date	06.04.2015

HISTORICAL INFORMATION

Name	Hope Waddel Institution	Construction Year	1894	Owner	Presbyterian Church
School Type	Secondary	Current Use	JSS3/SS1 block		

BUILDING CHARACTERISTICS

Size	462.1m²	Materials	Wall Cobble stones	Construction Technique	Wall Stones
No of Floors	2		Floor Concrete+ CS &wood		Floor RC+ Wood boarding
			Roof Iron corrugated sheets		Roof Steel

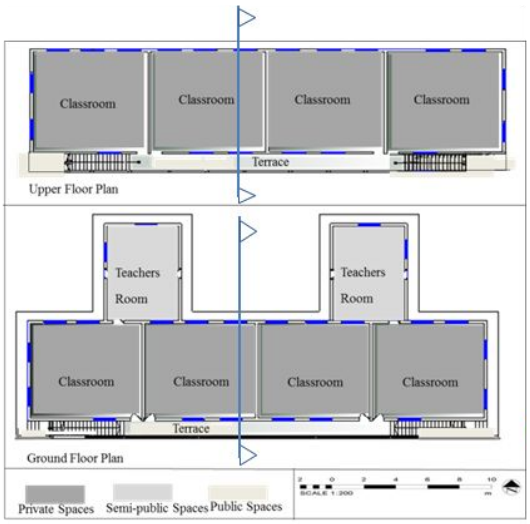
VALUES

Historical	X	Aesthetic		Economic	X	Educational	X
Social	X	Religious	X	Environmental	X	Architectural	X

LOCATION MAP

Diamond Hill area

PLAN



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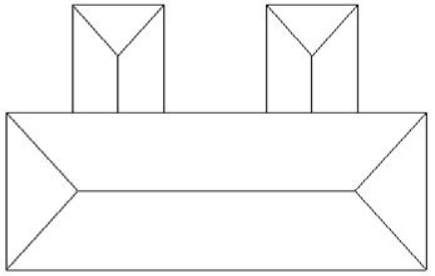

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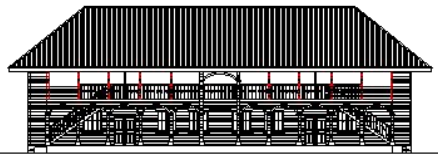

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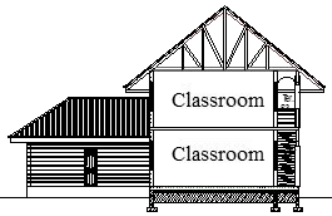
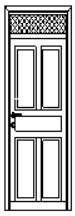
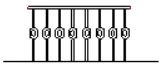


PHOTO

ARCHITECTURAL ELEMENTS

PORCH	DOORS	WINDOWS	CORNICE	STAIRCASE/BALUSTRADES
	 Door material Wooden Color Natural	 Window material Wooden Color Natural		 Staircase material Concrete+ Iron Color Gray  Balustrade material Stones Color Gray

RC-Reinforced Concrete; CSS-Cement Sand Screed

Researcher's Name: Ejeng Ukabi, MS Arch. EMU North Cyprus

INVENTORY FORM BRITISH COLONIAL SCHOOL BUILDINGS IN CALABAR (NIGERIA)

Inventory No	BCSB 3	Street	Chalmer Road	Date	16.04.2015

HISTORICAL INFORMATION

Name	Edgerly Girls School	Construction Year	1898	Owner	Presbyterian Church
School Type	Secondary School	Current Use	Laboratory block		

BUILDING CHARACTERISTICS

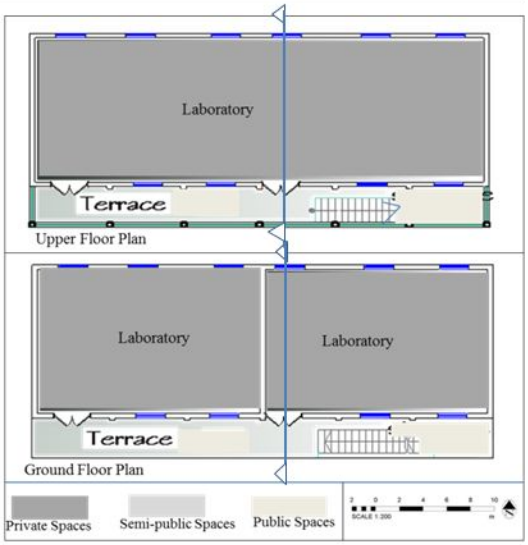
Size	180.7m²	Materials	Wall: CS blocks Floor: Concrete+ CS Roof: Iron corrugated sheets	Construction Technique	Wall: Blocks Floor: Concrete slab Roof: Timber
No of Floors	2				

VALUES

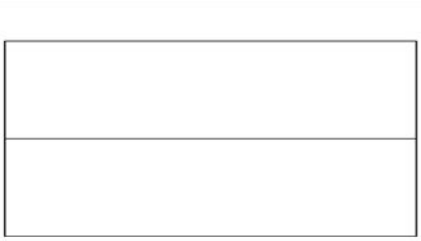
Historical	X	Aesthetic		Economic	X	Educational	X
Social	X	Religious	X	Environmental	X	Architectural	X

LOCATION MAP

PLAN



ROOF PLAN



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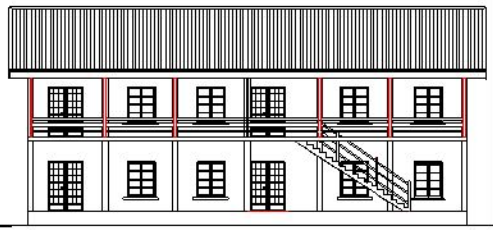
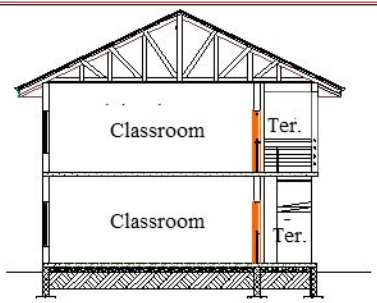
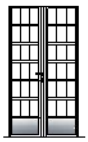
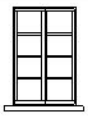
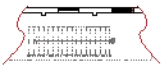


SECTION



PHOTO

ARCHITECTURAL ELEMENTS

PORCH	DOORS	WINDOWS	CORNICE	STAIRCASE/BALUSTRADES
				
	Door material: Met al glazed Color: Red	Window material: Wooden Color: Red		Staircase material: Concrete+ Iron Color: Gray  Balustrade material: Iron Color: Gray

RC-Reinforced Concrete; CSB-Cement Sand Screed

Researcher's Name: Ejeng Ukabi, MS Arch. EMU, North Cyprus

INVENTORY FORM BRITISH COLONIAL SCHOOL BUILDINGS IN CALABAR (NIGERIA)

Inventory No	BCSB 4	Street	Eyo Edem Street	Date	21.04.2015

HISTORICAL INFORMATION

Name	Duke Town	Construction Year	1953	Owner	Presbyterian Church
School Type	Primary School	Current Use	Class 1 - 6 block		

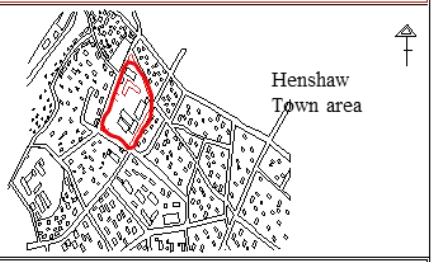
BUILDING CHARACTERISTICS

Size	486.4 m²	Materials	Wall: Cobble stones Floor: Concrete+ CS Roof: Iron corrugated sheets	Construction Technique	Wall: Stones Floor: Concrete slab Roof: Timber
No of Floors	1				

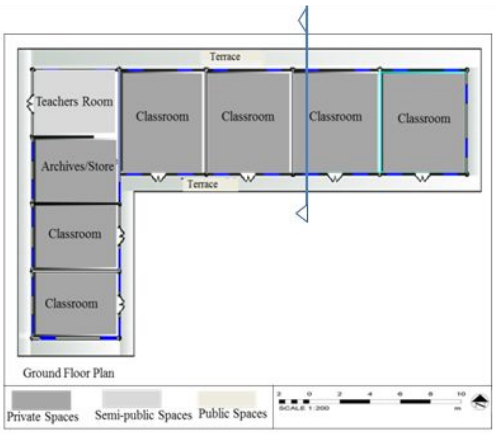
VALUES

Historical	X	Aesthetic		Economic	X	Educational	X
Social	X	Religious	X	Environmental	X	Architectural	X

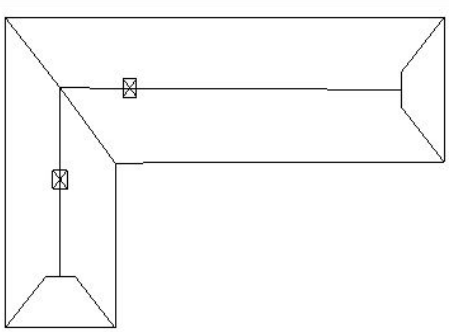
LOCATION MAP



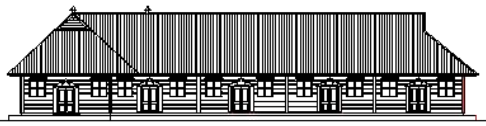
PLAN



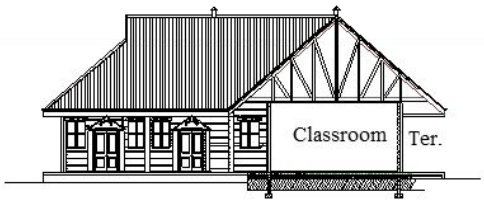
ROOF PLAN



ELEVATION

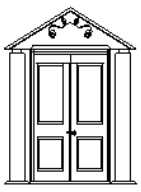


SECTION



PHOTO

ARCHITECTURAL ELEMENTS

PORCH	DOORS	WINDOWS	CORNICE	STAIRCASE/BALUSTRADES
				
	Door material: Wooden Color: Deep gray	Window material: Metal Color: Dark gray		

RC-Reinforced Concrete; CSS-Cement Sand Screed

Researcher's Name: Ejeng Ukabi, MS Arch. EMU, North Cyprus

INVENTORY FORM: BRITISH COLONIAL SCHOOL BUILDINGS IN CALABAR (NIGERIA)

Inventory No	BCSB 5	Street	Old Odupkani Road	Date	01.05.2015

HISTORICAL INFORMATION

Name	St. Patrick College	Construction Year	1934	Owner	Roman Catholic Church
School Type	Secondary	Current Use	Senior Secondary/Staff Block		

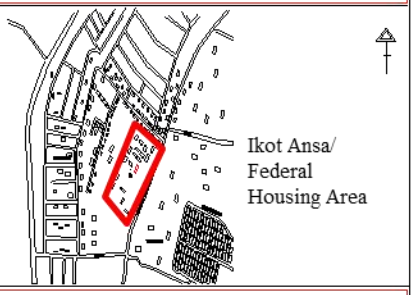
BUILDING CHARACTERISTICS

Size	652.6m²	Materials	Wall: CS Blocks Floor: Concrete+ CS & wood Roof: Iron corrugated sheets	Construction Technique	Wall: Blocks Floor: Concrete slab + Wood boards Roof: Timber
No of Floors	2				

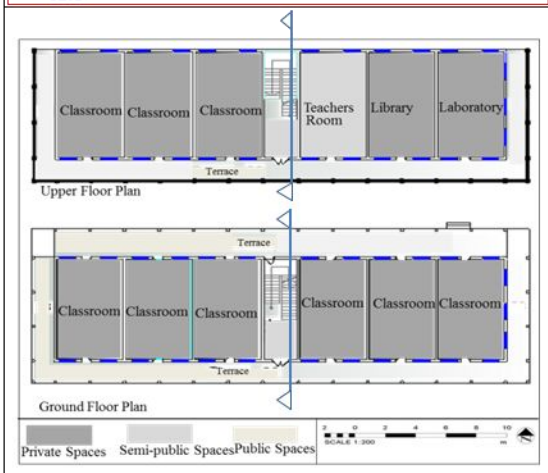
VALUES

Historical	X	Aesthetic		Economic	X	Educational	X
Social	X	Religious	X	Environmental	X	Architectural	X

LOCATION MAP



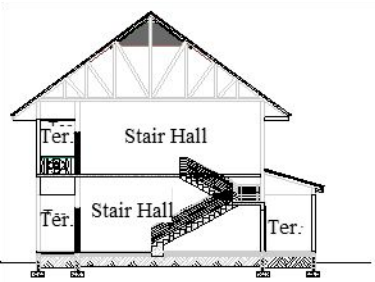
PLAN



ROOF PLAN

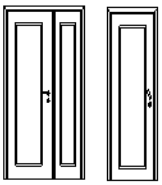
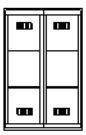
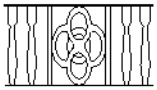
ELEVATION

SECTION



PHOTO

ARCHITECTURAL ELEMENTS

PORCH	DOORS	WINDOWS	CORNICE	STAIRCASE/BALUSTRADES
				
	Door material: Metal Color: Green	Window material: Metal Color: Green		Door material: Stones Color: WhiteGreen

RC-Reinforced Concrete; CSS-Cement Sand Screed

Researcher's Name: Ejeng Ukabi, MS Arch EMU, North Cyprus

INVENTORY FORM: BRITISH COLONIAL SCHOOL BUILDINGS IN CALABAR (NIGERIA)

Inventory No	BCSB 6	Street	Goldie Street	Date	15.05.2015

HISTORICAL INFORMATION

Name	Holy Child Girls	Construction Year	1953	Owner	Roman Catholic Church
School Type	Secondary	Current Use	JSS 3 Block		

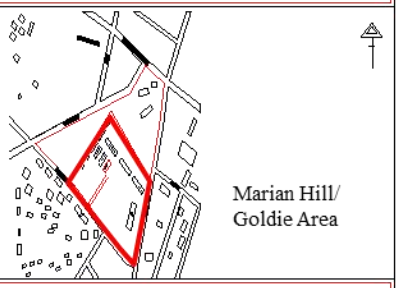
BUILDING CHARACTERISTICS

Size	485.5m²	Materials	Wall: CS Blocks Floor: Concrete+ CS Roof: Iron corrugated sheets	Construction Technique	Wall: Blocks Floor: Concrete slab Roof: Timber
No of Floors	1				

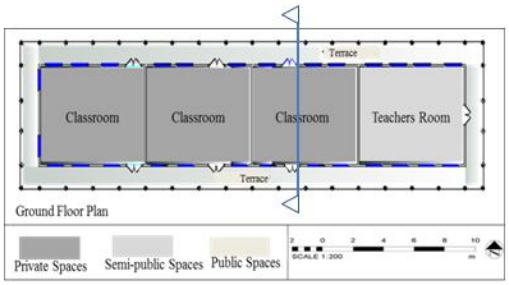
VALUES

Historical	X	Aesthetic		Economic	X	Educational	X
Social	X	Religious	X	Environmental	X	Architectural	X

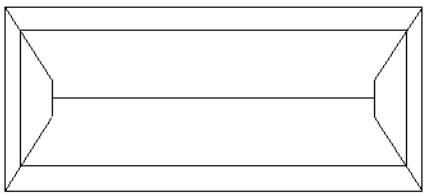
LOCATION MAP



PLAN

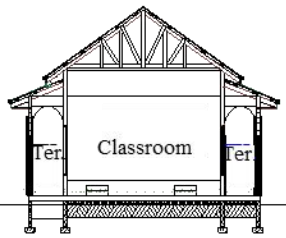


ROOF PLAN



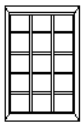
ELEVATION

SECTION



PHOTO

ARCHITECTURAL ELEMENTS

PORCH	DOORS	WINDOWS	CORNICE	STAIRCASE/BALUSTRADES
				
	Door material: Metal Color: Red	Window material: Metal Color: Red		

RC-Reinforced Concrete; CSS-Cement Sand Screed

Researcher's Name: Ejeng Ukabi, MS Arch. EMU, North Cyprus

INVENTORY FORM: BRITISH COLONIAL SCHOOL BUILDING S IN FAMAGUSTA (NORTH CYPRUS)

Inventory No	BCSB 7	Street	Ziya Gökalp Caddesi	Date	15.12.2014

HISTORICAL INFORMATION

Name	Endustri Meslek Lisesi	Construction Year	1906	Owner	TRNC
School Type	Vocational School	Current Use	Administrative/Workshops		

BUILDING CHARACTERISTICS

Size	519.1m²	Materials	Wall: Yellow sand stones Floor: Concrete Roof: Concrete	Construction Technique	Wall: Stones Floor: Concrete CS Roof: RC
No of Floors	3				

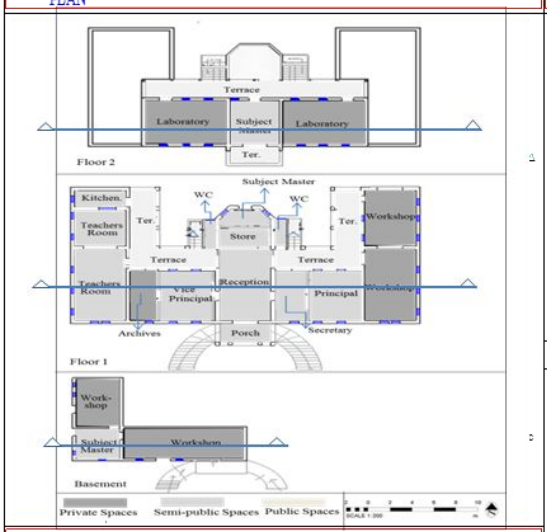
VALUES

Historical	X	Aesthetic		Economic	X	Educational	X
Social	X	Religious		Environmental	X	Architectural	X

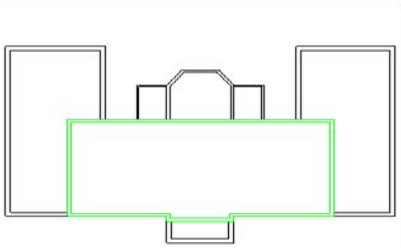
LOCATION MAP

Canbulat District

PLAN

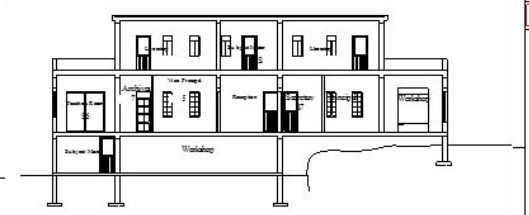


ROOF PLAN



ELEVATION

SECTION

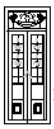


PHOTO

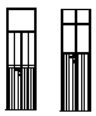
ARCHITECTURAL ELEMENTS

PORCH

DOORS



Door material: Wood + glass
Color: Black



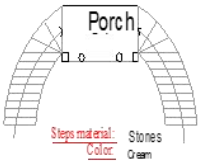
Door material: Aluminum
Color: White

WINDOWS

Window material: Aluminum + glass
Color: White

CORNICE

STAIRCASE/BALUSTRADES



Steps material: Stones
Color: Cream

Balustrades material: Stones
Color: White

RC-Reinforced Concrete; CSS-Cement Sand Screed

Researcher's Name: Ejeng Ukabi, MS Arch. EMU, North Cyprus

INVENTORY FORM: BRITISH COLONIAL SCHOOL BUILDING S IN FAMAGUSTA (NORTH CYPRUS)

Inventory No	BCSB 8	Street	Namik Kemal Sokak	Date	17.12.2014

HISTORICAL INFORMATION

Name	Gazi ilkokulu	Construction Year	1924	Owner	TRNC
School Type	Primary School	Current Use	Primary School		

BUILDING CHARACTERISTICS

Site	317.4m²	Materials	Wall: Yellow sandstones Floor: Concrete Roof: Reinforced concrete tiles	Construction Technique	Wall: Stones Floor: Concrete slab Roof: Timber
No of Floors	1				

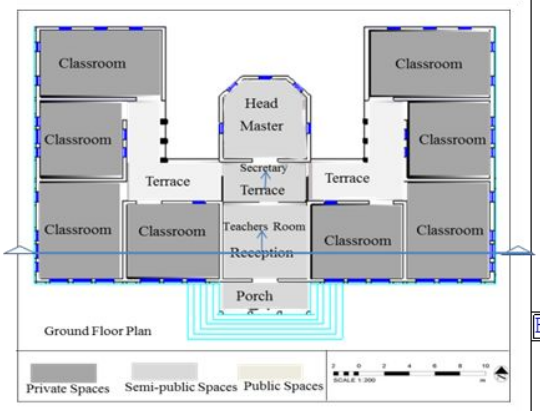
VALUES

Historical	X	Aesthetic		Economic	X	Educational	X
Social	X	Religious		Environmental	X	Architectural	X

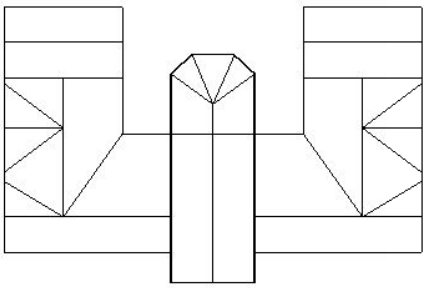
LOCATION MAP

Namik Kemal area-Walled City

PLAN

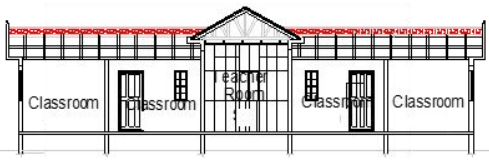


ROOF PLAN



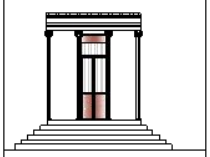
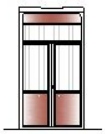
ELEVATION

SECTION



PHOTO

ARCHITECTURAL ELEMENTS

PORCH	DOORS	WINDOWS	CORNICE	STAIRCASE/BALUSTRADES
		 		

RC-Reinforced Concrete; CSS-Cement Sand Screed

Researcher's Name: Ejeng Ukabi, MS Arch. EMU, North Cyprus

INVENTORY FORM: BRITISH COLONIAL SCHOOL BUILDING S IN FAMAGUSTA (NORTH CYPRUS)

Inventory No	BCSB9	Street	Cengizhan Sokak	Date	19.12.2014

HISTORICAL INFORMATION

Name	Canbulat Özgü: lisk Ortaokulu	Construction Year	1950	Owner	TRNC
School Type	Secondary School	Current Use	Secondary School		

BUILDING CHARACTERISTICS

Size	1281.1 m²	Materials	Wall: Yellow sand stones+red bricks Floor: Concrete slab Roof: RC	Construction Technique	Wall: Stones+RC Floor: Concrete slab Roof: RC
No of Floors	2				

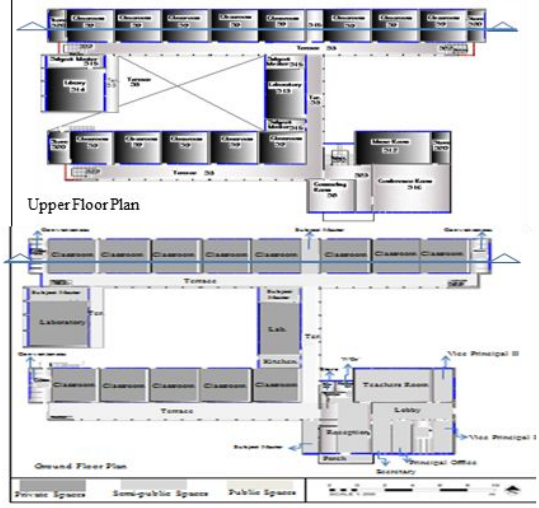
VALUES

Historical	X	Aesthetic		Economic	X	Educational	X
Social	X	Religious		Environmental	X	Architectural	X

LOCATION MAP

Canbulat District

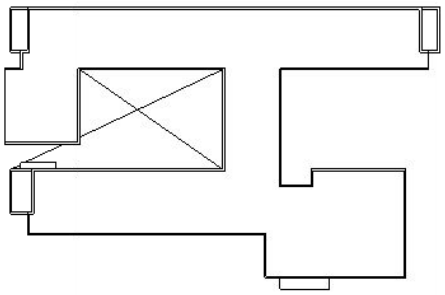
PLAN



Upper Floor Plan

Ground Floor Plan

ROOF PLAN

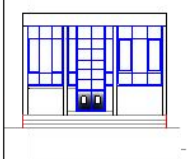
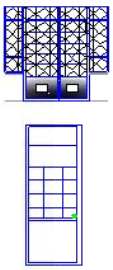
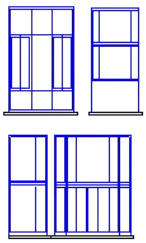


ELEVATION

SECTION

PHOTO

ARCHITECTURAL ELEMENTS

PORCH	DOORS	WINDOWS	CORNICE	STAIRCASE/BALUSTRADES
	 Door material: metal+glass Color: Black	 Window material: metal/Alum+glass Color: Grey/Black		

RC-Reinforced Concrete; CSS-Cement Sand Screed

Researcher's Name: Ejeng Ukabi, MS Arch. EMU, North Cyprus

INVENTORY FORM: BRITISH COLONIAL SCHOOL BUILDING S IN FAMAGUSTA (NORTH CYPRUS)

Inventory No	BCSB 10	Street	Aktarma ç Sokak	Date	22.12.2014

HISTORICAL INFORMATION

Name	Polatpasa ilkokulu	Construction Year	1955	Owner	TRNC
School Type	Primary School	Current Use	Primary School		

BUILDING CHARACTERISTICS

Size	357.5m²	Materials	Wall: Yellow sand stones Floor: Concrete Roof: Concrete	Construction Technique	Wall: Stones Floor: Concrete slab Roof: RC
No of Floors	1				

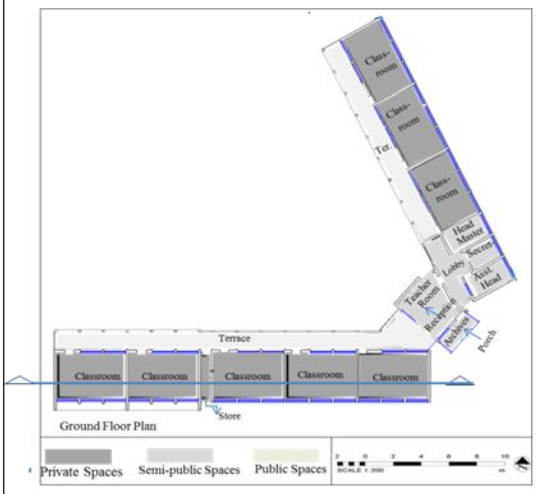
VALUES

Historical	X	Aesthetic		Economic	X	Educational	X
Social	X	Religious	X	Environmental	X	Architectural	X

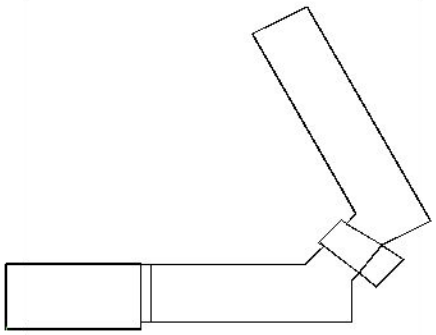
LOCATION MAP

Canbulat District

PLAN

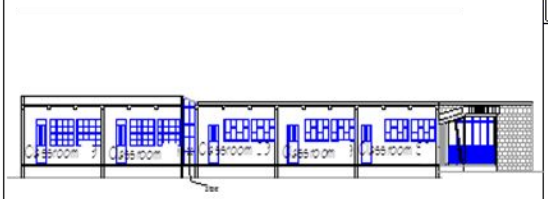


ROOF PLAN



ELEVATION

SECTION



PHOTO

ARCHITECTURAL ELEMENTS

PORCH	DOORS	WINDOWS	CORNICE	STAIRCASE/BALUSTRADES
				
	Door material: Iron Color: Black	Window material: Metal+ glass Color: Gray		

RC-Reinforced Concrete; CSS-Cement Sand Screed

Researcher's Name: Ejeng Ukabi, MS Arch. EMU, North Cyprus

INVENTORY FORM: BRITISH COLONIAL SCHOOL BUILDING S IN FAMAGUSTA (NORTH CYPRUS)

Inventory No	BCSB11	Street	Cengiz Topel Sokak	Date	24.12.2014

HISTORICAL INFORMATION

Name	Canbulat ilkokulu	Construction Year	1955	Owner	TRNC
School Type	Primary School	Current Use	Primary School		

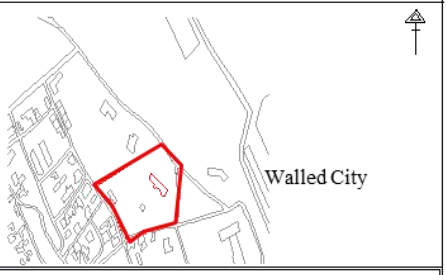
BUILDING CHARACTERISTICS

Size	338.6m²	Materials	Wall: CS Floor: Concrete Roof: Red concrete tiles+ Concrete	Construction Technique	Wall: Blocks Floor: Concrete slab Roof: Timber
No of Floors	1 and 2				

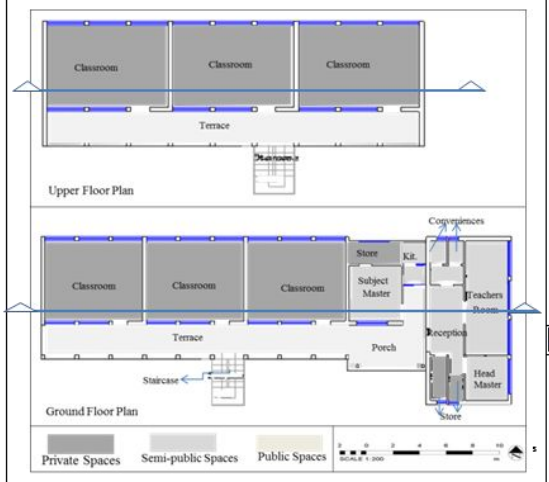
VALUES

Historical	X	Aesthetic		Economic	X	Educational	X
Social	X	Religious		Environmental	X	Architectural	X

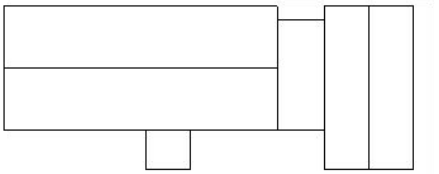
LOCATION MAP



PLAN

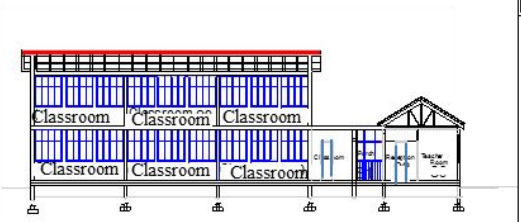


ROOF PLAN



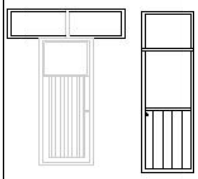
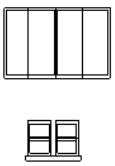
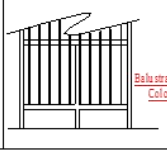
ELEVATION

SECTION



PHOTO

ARCHITECTURAL ELEMENTS

PORCH	DOORS	WINDOWS	CORNICE	STAIRCASE/BALUSTRADES
	 Door material: Aluminum+ glass Color: White	 Window material: Aluminum+ glass Color: White		 Staircase material: RC Color: Cream  Balustrades material: Iron Color: Green

RC-Reinforced Concrete; CS-Cement Sand & Grest

Researcher's Name: Ejeng Ukabi, MS Arch. EMU, North Cyprus

INVENTORY FORM: BRITISH COLONIAL SCHOOL BUILDINGS IN FAMAGUSTA (NORTH CYPRUS)

Inventory No	BCSB12	Street	Topcu Bulvari	Date	26.12.2014

HISTORICAL INFORMATION

Name	Alasya ilkokulu	Construction Year	1959	Owner	TRNC
School Type	Primary School	Current Use	Primary School		

BUILDING CHARACTERISTICS

Size	1316.69m²	Materials	Wall: Yellow sand stones Floor: Concrete Roof: Concrete+ Corrugated iron sheets	Construction Technique	Wall: Stones Floor: Concrete slab Roof: RC+ Timber
No of Floors	1				

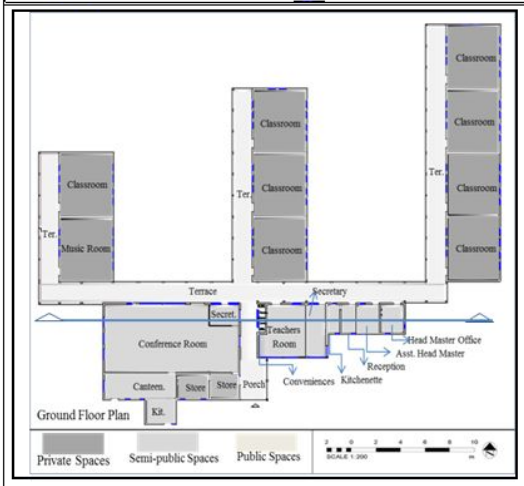
VALUES

Historical	X	Aesthetic		Economic	X	Educational	X
Social	X	Religious		Environmental	X	Architectural	X

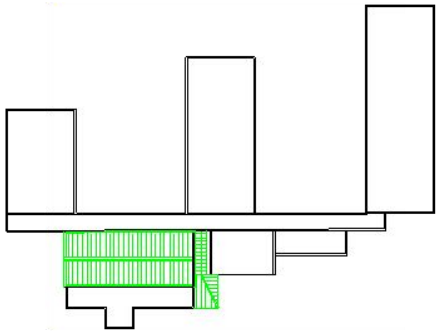
LOCATION MAP

Dumlupinar District

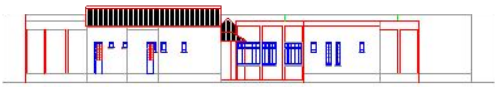
PLAN



ROOF PLAN



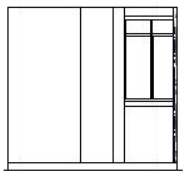
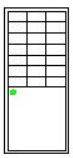
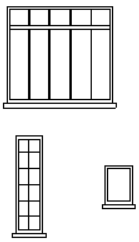
ELEVATION



SECTION

PHOTO

ARCHITECTURAL ELEMENTS

PORCH	DOORS	WINDOWS	CORNICE	STAIRCASE/BALUSTRADES
	 Door material: Metal+ glass Color: Dark brown	 Window material: Metal+ glass Color: Brown		

RC-Reinforced Concrete; CSS-Cement Sand Screed

Researcher's Name: Ejeng Ukabi, MS Arch. EMU, North Cyprus

INVENTORY FORM: BRITISH COLONIAL SCHOOL BUILDING S IN FAMAGUSTA (NORTH CYPRUS)

Inventory No	BCSB 13	Street	Ataç Sokak	Date	29.12.2014

HISTORICAL INFORMATION

Name	Gazi Magusa Meslek Lisesi	Construction Year	1959	Owner	TRNC
School Type	Vocational School	Current Use	Vocational School		

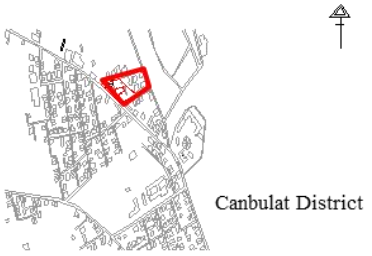
BUILDING CHARACTERISTICS

Size	524.41m²	Materials	Wall: CSS Floor: Concrete Roof: Concrete	Construction Technique	Wall: Blocks Floor: Concrete slab Roof: RC
No of Floors	2				

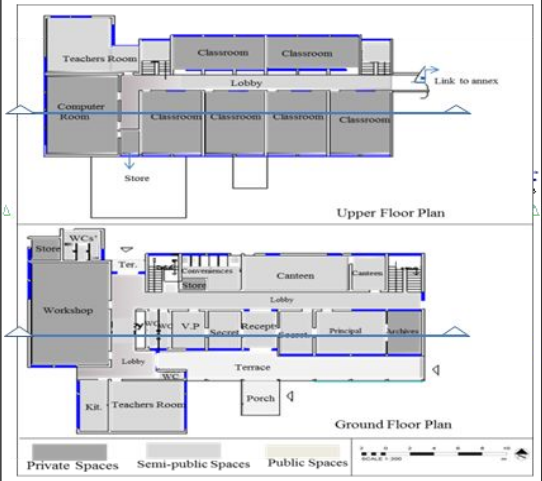
VALUES

Historical	X	Aesthetic		Economic	X	Educational	X
Social	X	Religious	X	Environmental	X	Architectural	X

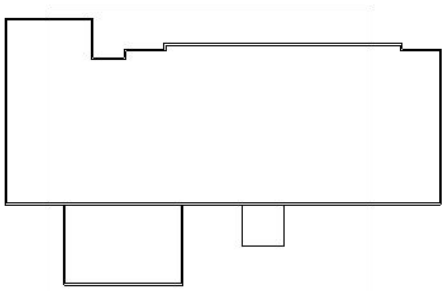
LOCATION MAP



PLAN

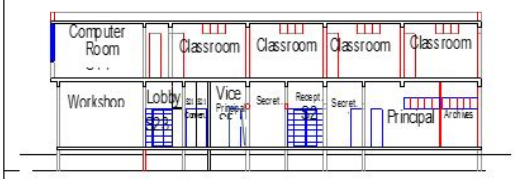


ROOF PLAN



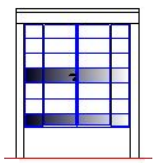
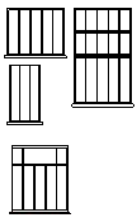
ELEVATION

SECTION



PHOTO

ARCHITECTURAL ELEMENTS

PORCH	DOORS	WINDOWS	CORNICE	STAIRCASE/BALUSTRADES
				
	Door material: Metal+ glass Color: White	Window material: Iron + glass Color: White		

RC-Reinforced Concrete; CSS-Cement Sand Screed

Researcher's Name: Ejeng Ukabi, MS Arch. EMU, North Cyprus

INVENTORY FORM: BRITISH COLONIAL SCHOOL BUILDING S IN FAMAGUSTA (NORTH CYPRUS)

Inventory No	BCSB 14	Street	Ibrahim Kazim Cad	Date	31.12.2014

HISTORICAL INFORMATION

Name	Sehit Huseyin Akil ilkokulu	Construction Year	1959	Owner	TRNC
School Type	Primary School	Current Use	Primary School		

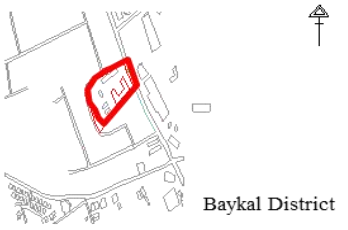
BUILDING CHARACTERISTICS

Size	386.05m²	Materials	Wall: Yellow sand stones Floor: Concrete Roof: Red concrete tiles	Construction Technique	Wall: Stones Floor: Concrete slab Roof: Concrete/Timber
No of Floors	1				

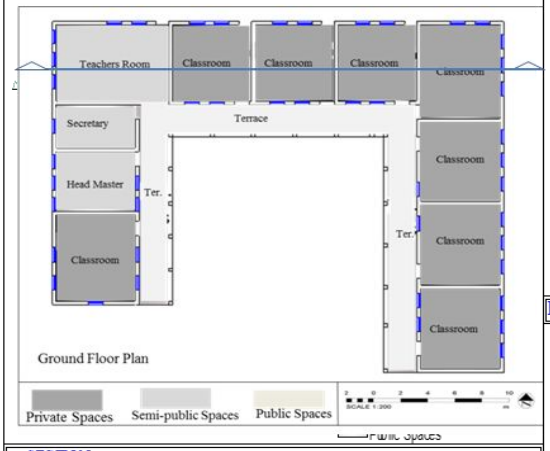
VALUES

Historical	X	Aesthetic		Economic	X	Educational	X
Social	X	Religious		Environmental	X	Architectural	X

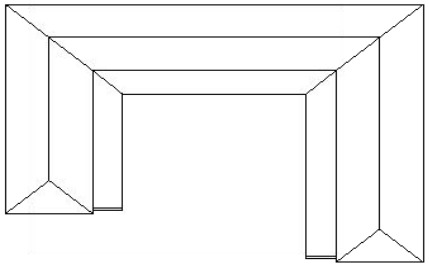
LOCATION MAP



PLAN

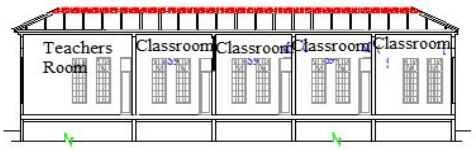


ROOF PLAN



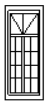
ELEVATION

SECTION



PHOTO

ARCHITECTURAL ELEMENTS

PORCH	DOORS	WINDOWS	CORNICE	STAIRCASE/BALUSTRADES
				
	Door material: Aluminum+ glass Color: Light gray/cream	Window material: Aluminum+ glass Color: White	Cornice material: Stones Color: Yellow	

RC-Reinforced Concrete; CSS-Cement Sand Screed

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