Turkish Cypriot Public School Architecture from 1878 to 2000: the Socio-Political and Educational Reflections

Nilay Bilsel

Submitted to the
Institute of Graduate Studies and Research
In partial fulfilment of the requirements for the degree of

Doctor of Philosophy
in
Architecture

Eastern Mediterranean University
July 2017
Gazimağusa, North Cyprus

Approval of the Institute of Graduate Studies and Research

Prof. Dr. Mustafa Tümer
Director

I certify that this thesis satisfies the requirements as a thesis for the degree of Doctor of Philosophy in Architecture.

Prof. Dr. Naciye Doratlı
Chair, Department of Architecture

We certify that we have read this thesis and that in our opinion it is fully adequate in scope and quality as a thesis for the degree of Doctor of Philosophy in Architecture.

Prof. Dr. Özgür Dinçyürek
Supervisor

Examining Committee

1. Prof. Dr. T. Elvan Altan
2. Prof. Dr. Özgür Dinçyürek
3. Prof. Dr. Kokan Grchev
4. Prof. Dr. Güven Arif Sargın
5. Assoc. Prof. Dr. Kağan Günçe

ABSTRACT

This thesis examines the architectural transformation of Turkish Cypriot public school buildings in Cyprus from the beginning of British colonial rule of 1878 till 2000s in relation with the political, social and cultural influences, and educational policies of the time. During the conflicted history of Cyprus, schools played a critical role in the identity formation of the Turkish Cypriot community, a role beyond their educational mission. In the early decades of the British rule, schools constructed by the administration largely followed the vernacular traditions of the past, with only a minimal colonial architectural language. The Turkish Cypriot ethnic nationalism found a long waited voice in the birth and the rise of Atatürk's modern Turkey; schools becoming places of dissemination of Kemalist ideas. The arrival of modern architecture in Turkish schools, however, was delayed by two decades after the first examples appeared in Turkey, due to the British suppressive policies of 1930s and 1940s and the advent of World War II. Following the 1931 revolt and the climbing Greek Cypriot struggle for *enosis,* the colonial regime tried to suppress and control both Greek and Turkish Cypriot ethnic nationalism; education being most adversely affected by the closure of many schools and centralisation of the system. The manifestation of this policy of the colonial regime in the built form of the period was the avoidance of all elements that would promote ethnic identity, paying all the attention to functionality. After the World War II, modernism became the core value of Turkish Cypriot nationalism, and all Turkish Cypriot schools were built in modern style, continuing also after the independence of Cyprus in 1960. The division of the island in 1974 brought significant changes in social and economic structure of northern Cyprus.

Within the framework of socio-political and educational transitions took place in Cyprus, the research presented in this thesis is divided into four time periods. For each period, representative examples of school buildings are analysed after giving an account of the political history and changes of educational policies (Chapters 3-6). This is followed by a comparative study of physical and functional properties of schoolyards and school buildings, together with the spatial analyses of all selected schools (Chapter 7).

The findings of the research undertaken show that the early school buildings built by the British administration have diverse identities of spatial configurations and built forms. On the other hand, there is a mutual spatial pattern of the school buildings of late 1950s until present. Based on the results of the analysis, starting with the late 1950s, a less hierarchical spatial relationship between student and administrative spaces is found in Turkish Cypriot schools, as compared to the rest of periods studied.

Keywords: Cyprus, colonialism, school buildings, spatial analysis, modernism, education.

ÖZ

Bu tezde, Kıbrıs'ta İngiliz sömürge yönetiminin başladığı 1878'den 2000'li yıllara kadar uzanan dönemde, Türk devlet okullarının politik, sosyal ve kültürel etkenler ile eğitim politikalarına bağlı olarak mimari dönüşümleri araştırılmıştır. Kıbrıs Türkünün varoluş mücadelesinde okullar, eğitim misyonlarının ötesinde, önemli bir rol üstlenmişlerdir. İngiliz yönetimin ilk onyıllarında inşa edilen okullarda genellikle yerel geleneklerinin ön plana çıkmış olduğu ve sömürge mimari diline az yer verildiği görülmüştür. Atatürk'ün modern Türkiye'yi inşası ile Kıbrıs Türk etnik milliyetçiliği uzun zamandan beklediği sesi bulmuş; özellikle okullar Kemalist düşüncenin yayıldığı yerler olmuştur. Buna rağmen, gerek 1930'lar ve 1940'larda hüküm süren baskıcı İngiliz politikaları, gerekse İkinci Dünya Savaşı'nın başlaması, Türkiye'de 1930'larda görülmeye başlanan modern okul mimarisinin Kıbrıs'a gelişini yirmi yıl kadar geçiktirmiştir. Kıbrıslı Rumların yükselen *enosis* mücadelesi ve 1931 isyanı sonunda, Türk ve Rum etnik milliyetçiliğini kontrol altında tutmak amacı güden İngiliz sömürge yönetimi baskıcı bir tutum içine girmiştir. Birçok okul kapatılmış, eğitimde merkeziyetçi bir yönetime geçilmiştir. Sömürge yönetimin bu yeni tutumu mimariye de yansımış, bu dönemde inşa edilen resmi binalarda işlevselliğin ön plana çıkarıldığı ve etnik kimliği çağrıştıran her türlü detaydan kaçınıldığı görülmüştür. İkinci Dünya Savaşı'ndan sonra Kıbrıs Türk milliyetçiliğinin ana değer olarak modernizme sıkıca bağlandıklarını ve tüm okullarının bu tarzda inşa edildiği görülmektedir. Okul binalarında modern tarzın benimsenmesi, Kıbrıs Cumhuriyeti'nin kurulduğu 1960 yılından sonra da devam etmiştir.

Bahsedilen sosyo-politik ve eğitim alanında değişimler doğrultusunda, bu çalışma dört ana zaman dilimini içermektedir. Bu bağlamda, her dönem için sırası ile politik tarih, eğitim politikaları ve ilgili dönemi temsil eden okul binaları incelenmiştir (3-6. Bölümler). Bunu izleyen bölümde okullar ve alanlarının fiziki, fonksiyonel ve mekânsal özelliklerin karşılaştırmalı analizleri verilmiştir (Bölüm 7).

Bu araştırma erken İngiliz döneminde yapılan okul binalarının çeşitli mekansal ve formel kimlikler taşıdığını, göstermiştir. Diğer taraftan, 1950ler den günümüze kadar uzanan süreçte yapılan okul binalarında müşterek mekansal özelliklere rastlanmıştır. Yapılan analizler sonucu, diğer dönemlere kıyasla, 1950lerin sonlarından başlayan dönemde öğrenci – yönetim mekanlarındaki hiyerarşinin azaldığı görülmüştür.

Anahtar kelimeler: Kıbrıs, sömürgecilik, okul binaları, mekansal analiz, modernizim, eğitim.

To My Parents

Huriye and Ayhan

ACKNOWLEDGEMENT

Foremost, I would like to express my sincere gratitude to my advisor Prof. Dr. Özgür Dinçyürek for the continuous support of my Ph.D study and research. I would also like to thank to my thesis committee members: Prof. Kokan Grchev, Assoc. Prof. Dr. Kağan Günçe for their encouragement and insightful comments.

This thesis could not have been accomplished without my fiancé İsmail Safkan, who has always stood by my side with his warm encouragement, patience and love in every situation.

Last but not the least, I would like to thank my family: my parents for supporting me spiritually throughout writing this thesis and my life in general. I cannot thank enough to my mother Assoc. Prof. Dr. Huriye Bilsel, for believing in me, and the endless love and inspirations I received from her.

Above all, I am indebted to my father Prof. Dr. Ayhan Bilsel for his never-ending patience, guidance and encouragements throughout my study.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1

INTRODUCTION

Buildings are the first and foremost social entities which respond to questions about order, power, classification, and function. From its form to its function, and spatial layout, it is the social meaning that determines the nature of a building. In one respect, the role of architecture is to deliver political, cultural or religious ideas into built form; "to make visible invisible values, ideology and perspectives" (Findlay 2005, p. 201). As George Orwell (1968, p. 137) asserts "all issues are political issues" and "there is no such thing as keeping out of politics". Buildings also have the power to influence inhabitants through codes of social behaviour embedded in them. We encounter some of these in various forms in everyday life, such as the movement patterns in a hospital, cultural traditions in a sacred place, and arrangement of desks in a classroom. Architecture then, with such codes, signs, and images, can be a form of control (Kraftl and Adey, 2008).

Schools are an exceptionally significant kind of buildings which respond to the political ideals, influences, and manipulations of a given period (Bozdoğan 2001, p. 42). Schools are more than buildings in the sense "they are products of social behaviour" (Burke and Grosvenor 2008, p. 8); they are also places where one can find cultural, national, and religious signs of a society. On a personal level, schools are the first long term places where children spend most of their time away from home. The

experiences gained at school are the building blocks that shape the individual towards becoming a member of the society. They carry sentiments and meaning. Social struggles from a personal level to national conflicts are matured through education in schools. School buildings not only witness these struggles, but also undertake new identities, bearing references to their past. Buildings are important visual symbols of a society and also instruments to understand the society through the ordering of space (Hillier and Hanson 1984, p.2).

Although schools from all around the world serve for one main purpose, that is to educate, the way they evolved through time varies. From an open space to a church, from a house to a mosque, education is carried in many different forms and space for several centuries. There are many factors which contribute to transformation of education environment. The "school" as we know it today is a rather new formation. Architects, educators, psychologists and many other scholars have contributed over hundred years to find the ideal school design, layout and curriculum. Not before the mid-20th century the collaboration of educationalists with architects produced innovative school designs. There cannot be a single "ideal" school design as dynamically evolving nature of societies calls for different solutions in different regions of the world. In conflicted zones however, such as in Cyprus, political and cultural causes supersede the innovative approach in school design.

Cyprus has been under several dominations for many centuries. During the middle ages the island was occupied by Lusignans, Genoese, and the Venetians. It was ruled by the Ottomans from 1571 until the British arrived in 1878 to "occupy and administer", in return for offering protection to Ottoman Empire. Cyprus became a Crown Colony in 1925, and remained so until it was declared an independent republic

in 1960. Three years later, increased intercommunal conflicts led to political violence. This caused a displacement of an important fraction of Turkish Cypriot people from suburbs to safer enclaves. Turkey's intervention of 1974 practically divided the island into two; the geographic and administrative division prevailing today.[1]

The importance of education and its institutions in a nation cannot be underestimated. Gellner, a leading scholar on nationalism, places education at the centre of his theory. Education led to cultural homogeneity in the society. He goes to the extent to say that modern society is "one in which no sub-community, below the size of one capable of sustaining an independent educational system, can any longer reproduce itself" (Gellner 1983, p.32). In elucidating. Fitche's concept of nationalism Kedourie adds

> … on nationalist theory, education must have a central position in the work of the state. The purpose of education is not to transmit knowledge, traditional wisdom, and the ways devised by a society for attending to the common concerns; its purpose rather is wholly political, to bend the will of the young to the will of the nation. Schools are instruments of state policy, like the army, the police, and the exchequer (Kedourie 1961, pp. 83-84).

The origins of Greek and Turkish Cypriot nationalism and formation of respective national identities have been adequately studied (Kızılyürek 2002, Bryant 2004, Michael 2005, Nevzat 2005, Çağlayan 2014). Şahin (2008, p. 37) rightly assesses that, among other factors, education was the main tool in the spreading of nationalism and the "imagining of a nation" during the British colonial rule. The role education in the formation of Greek and Turkish Cypriot nationalism is best summarised by Bryant (2004, p. 127): "through education Cypriots learned not how to think nationally but

[1] For a comprehensive history of Cyprus see Hill (2010). A briefer account is Maier (1968). For a modern history of Cyprus, see Richter (2010).

how to be nationally", that is to say to be Greeks or Turks. Not long after Atatürk's westernisation programme has been initiated in Turkey, a parallel transformation was induced in the Turkish Cypriot identity, where the primary tool of change was the secular education that cultivated the nationalistic ideology. For Turkish Cypriots education was a progression towards "enlightenment".

For the reasons detailed later in the thesis, the British did not interfere with the segregated education in Cyprus. Greek and Turkish Cypriot schools had separate curricula adopted from schools in Greece and Turkey, respectively. Seeing that education is an important tool to create and politicise ethnic and national identities, the colonial rule even encouraged segregated education. The segregation in education led to the segregation of the two communities, helping the colonial rule to implement their well-known "divide and rule" policy; a policy which the British have applied with some success in most of their colonies. For the two communities, nationalism had developed through different discourses, and although both communities have lived together for many years, a common Cypriot identity was never constructed. Eventually each community imagined themselves as part of their motherlands, Greece and Turkey.

1.1 Aims and Objectives

The political turmoil and instability, the emergence of ethnic and religious nationalism, the social, cultural and political changes in Cyprus during the last century found such a profound expression both in education and in architectural identity of school building that it deserves an in-depth study. This provides both a motivation and framework for this study. The aim of this thesis is to study the architecture of Turkish Cypriot school buildings in Cyprus from the British rule till present in relation with the social, cultural

and political influences of the time. In order to carry out this study 11 Turkish Cypriot schools have been selected which exemplify the influences of different political shifts during this period. The investigation is carried out by taking into consideration of the physical and spatial characteristics at the time they were built. Education and its shifting policies in Cyprus have been manipulated by political agents for more than a century. Education, therefore, is an integral dimension of this study.

There are some noteworthy studies on education and school buildings in Cyprus. Given (1997) has investigated the national and symbolic meanings of the Greek Cypriot school buildings during the British rule, and Özgüven (2004) has studied educational buildings in the transition from Ottoman to British, placing an emphasis on the former. The formation of Cypriot ethnic nationalism and its relation to education have been critically examined by Bryant (2004). More recently Gürdallı and Koldaş (2015) looked at the involvement of political power in the planning stage of official buildings of Nicosia from the eyes of their architects. With regards the history of education in Cyprus Behçet (1969), Photiou (2005), and Feridun (2011) provided extensive accounts. The status of woman in Turkish Cypriot education is reviewed by Dedeçay (2008). However, there is no single integrated study on Turkish Cypriot school buildings which incorporate all the essential components: the effects of socio-political changes, colonisation and decolonisation of education, the role of nationalism on education and vice versa, and the reflection of all these on the architectural formation of school buildings from late Ottoman, through the British periods, until today. This thesis is an attempt to fill this gap.

The structure of the thesis is as follows: Following the Introduction, Chapter 2 provides a general conceptual background. The development of the following chapters

is social, historical, and analytical derivatives of these fundamental concepts. Chapter 3 gives a political and historical account of Cyprus, concentrating on the school architecture in the early British period (1878-1931), and the educational policies of the late Ottoman and early British rules. The briefly outlined history begins with the medieval times in order to provide a background for the diverse social and cultural richness of Cyprus, by being at the crossroads of many civilisations. Chapter 4 examines the political reflections on education and school architecture following the 1931 revolt, one of the turning points in the history of Cyprus. The rise of ethnic nationalism and its imagined association with modernism is the backbone of Chapter 5, and covers the period from 1950 through the establishment of the Republic of Cyprus in 1960, to the Turkish intervention of 1974. In Chapter 6, post-1974 school buildings are investigated. Chapter 7 is devoted to formal, functional, and spatial analysis of Turkish Cypriot schools. General conclusions are given in Chapter 8. [2] The format of Chapters 3 to 6 follows the three steps: (n.1) political state of the period; (n.2) educational policies/changes; and (n.3) qualitative analysis of representative school buildings of the period.

1.2 Scope and Limitations

Within the scope of this study, four different levels of public educational institutions are investigated. As there is no existing record of regulations regarding the differences in the construction of different levels of educational institutions, this study investigates primary, secondary, high schools and teacher training colleges, without specific categorization. In the history of education in Cyprus, many school buildings served for

[2] Part of this research has been published in Bilsel and Dinçyürek (2014, 2017).

different educational levels in different periods due to different factors such as lack of infrastructure, wars, and other limitations.

There are three main categories of limitations. First, the study is limited chronologically. The study covers the period 1878 - 2000, where some of the most remarkable educational activities took place in Cyprus. Although the Ottoman period is also notable with regards to education and its place in architecture, it has not been included in this study in detail. Most of the Ottoman schools are demolished and, some of these schools were initially built for residential purposes. Nevertheless, the Ottoman influence in education is considered in related chapters.

The second limitation is about the ethnic and territorial division. The study covers only the Turkish Cypriot schools which remained in North Cyprus after 1974. Schools that remained in the southern part of Cyprus were isolated from the evolutionary process between 1974 and 2003 the northern part has experienced, and some of these school buildings were demolished in due time.

As a third limitation, only schools that are located at the district capitals are included in the study. The rationale behind this choice coincides with the socio-political theme of this study as the educational policies were shaped and put into practice first at the district capitals. As a matter of fact, until late 1950s there were only two Turkish Cypriot schools at secondary level, both of which were at the capital Nicosia. The prototype village primary schools were small in scale, often consisted of not more than two rooms, and thus not comparable with the larger and more sophisticated town schools.

The locations of towns where the schools studied in this thesis are shown in the map of Cyprus in Figure 1.1.

Figure 1.1. Map of Cyprus (Source: d-maps.com)

1.3 Methodology

Multiple research methods (qualitative/historical/quantitative) were employed in this thesis due to the multi-dimensional nature of the research undertaken.

Within the qualitative framework, social, political, cultural, and spatial discourses have been critically examined and discussed through the analysis of selected cases. Within each selected period, the socio-political background and its effects on educational policies are considered.

For the historical research, a comprehensive archival study has been conducted. To this end, the relevant documents at the Turkish Cypriot National Archives, the Evkaf Archives, the archives of TRNC Department of Antiquity, and the State Archives of the Republic of Cyprus were consulted. Documents examined include the British

Reports on Education, the official Cyprus Gazette, the Cyprus Blue Books, and certain correspondence between Evkaf and Colonial Government.

Field study of 11 schools was carried out. Schools were visited, digital photographs were taken,[3] observations were made, and missing architectural drawings were reproduced by the author. During these visits interviews with the headmaster and senior teachers were conducted and related oral and written documents were collected.

In order to analyse schools and their environment, schematic tables are generated. For each school three levels of analyses were conducted. At the first level of analysis the schoolyard location and functions and facilities within, accessibility, and building-street relations were assessed. At the second level, formal and functional analysis of the building was carried out, including the layout type, circulation, elements of repetitive to unique, additive to subtractive, symmetry and balance, adopted from Clark and Pause (2005) analytic diagrams. These diagrams are produced to enable comparative analyses of historical transformation of the selected school buildings. At the third level, spatial analysis developed by Hillier and Hanson (1984) were used to study the spatial connectivity and hierarchy in school buildings and to understand the temporal and spatial transformations. Buildings are not only important visual symbols of the society, but as Hillier and Hanson (1984, p.2) argues they are also instrumental to understand the society through the ordering of space. The inequality genotypes and justified graph analysis are methods used for decoding the cultural codes in a given spatial system. Justified graph analysis were carried out to determine the levels of

[3] Unless otherwise stated, all pictures in the thesis were taken by the author.

integration, control and hierarchy within the spaces in a building. In this thesis, the justified graphs are analysed in two stages: the visual and the mathematical analysis. Inequality genotypes are acquired by the outcome of the data obtained by justified graphs. The integration value of each node in the graph (where each node represent a space) is ranked from least integrated to the most integrated. For these analysis the *AGRAPH* software is used for the calculation of mathematical data.

The rationale behind the selection of cases is based on their being representative of the evolution of school building design of Turkish Cypriot schools. Few of them[4] were one of a kind during certain periods. Others had features which inspired the evolution of future schools.

As this study aims to analyse the physical evolution of school architecture shaped by socio-political transformations a chronological order is found most appropriate. Within the scope and limitations of the study, and also taking the historical and educational constraints into account, the time span is divided into four periods:

I. Early British period (late 19th century - 1931).

II. Mid-British colonial period (1931 - 1950).

III. Late British period - early Republic (1950 - 1974).

IV. Post-separation (1974 - 2000).

[4] e.g. the Idadi, Victoria Girls' School, Nicosia Boys' Lycée.

The underlying reasoning in constructing such a temporal division rests on the milestones in the political history of Cyprus which had significant reflections on the educational, social and cultural matters. The arrival of the British as the new rulers of Cyprus marked a new era in educational environments. The 1931 revolt was a turning point not only in political terms but its adverse effects on education. The second period covers the subsequent colonial suppression of ethnic nationalism and the distressed years of World War II. This suppression period had significant reflection on public architecture which differs from the previous period. The period starting with the 1950s marks the introduction of modernism in architectural style as an expression of the rising Turkish Cypriot nationalism against the Enosis claims of the Greek Cypriots. This period stands out as a period in which decolonisation became visible through architecture. The final episode has its beginning in 1974 intervention of Turkey which resulted in both geographic and administrative division. This last period has witnessed a common architectural identity of school buildings with the governmental buildings of TRNC.

This division differs from other studies. Tozan (2008) who studied the urbanism and architecture in Cyprus has divided the British colonial period into three episodes: 1878 - 1918, 1919 - 1938, and (1939 - 1960). Given (1998) has proposed a division of the same period which is closer to the present study: Orientalist (1878 – c.1900), Philhellenic (c.1900 – c.1930), and 'authentic Cypriot' (c.1930 – 1960).

Chapter 2

THEORETICAL BACKGROUND

2.1 Social theories of space and culture

Perhaps the most influential social theorist of culture in the second half of the 20th century, who greatly influenced the architectural discourse, was Michel Foucault. In his writings Foucault (1977, 2000) has extended the discourse of power from sociology to other fields of social sciences and humanities. Although he has been one of the most quoted philosopher by architects, he rarely wrote directly on architecture. According to Foucault power is everywhere and not exercised by individuals or classes, but "it is dispersed and subject-less, as elements of broad strategies but without individual authors" (Gaventa, 2003).

In Foucault's opinion power develops specifically from sovereign and disciplinary forms. Foucault believed that some forms of architecture are useful while others are malicious. He pointed out that the Panopticion, a prison built using the ideas of British philosopher Jeremy Bentham, as being a product of a malicious, carceral organisation. The Panoptican is a radially designed prison (Figure 2.2), where the guard is positioned in the centre, enabling him to observe all the prisoners. In his book *Discipline and Punish*, Foucault (1977) studied the period 1757-1830 when practice of torture was replaced by close surveillance in prisons, concluding that the principal mechanism of disciplinary power is the hierarchical observation (gaze). Hierarchical observation is based on the fact that one can control what people do just by observing them.

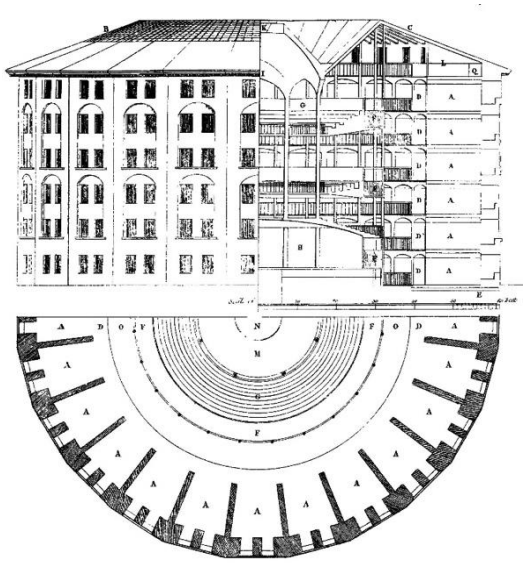


Figure 2.1. Jeremy Bentham's Panopticon (drawn by W. Reveley, 1791)

However, just like in the example of the architecture of a classroom, discipline is not always a negative exercise of power. "The tiered rows of seats in a lecture hall, or well-lit classrooms with large windows and wide aisles, not only facilitate learning; they also make it extremely easy for teachers to see what everyone is doing" (Gutting 2005, p. 82). The rules of space and time, as the two disciplines controlled by uniting the arrangement of the space (classrooms) and the routines marked by the clock (timetables). Such an organisation "controls every detail of the movements and expressions of all the actors playing their parts on the educational stage" (Benito, 2003). Foucault further argued that discipline can give humanity more freedom. Self-reflection, self-control, and self-discipline are the ways to the autonomous self (self-discipline trains our bodies enabling us to create what we want to create on the basis of our own choice).

According to Foucault the sovereign power is, on the other hand, the power of a government (or monarchy) and their agents. Following the footsteps of Foucault, Piro (2008) has analysed the Temple of Rajarja Chola, at Thanjavur, southern India. This

kind of large temples, according to Piro (2008), were built as visible demonstration (or in Foucault's terminology as an 'intensifier') of power.

Bourdieu (1977, 1990) developed a social theory around *habitus*, a word he used to refer to the complex net of structured predispositions into which people are socialised. Habitus is a collection of everyday rules of social life, a set of beliefs about social and physical reality. It provides a meaning for place; it is "the way the 'arbitrary' is constituted as the 'real', culture as nature, ideology inscribed in habit and habitat" (Dovey, 2008, p. 20). Daily life is a construction of history; at the same time constructing new history. The key relation between habitus and architecture is in the way space frames social practice. Space is both physical and social, and in a certain way social space transforms into physical space.

Another important contribution of Bourdieu is his work on 'fields'. A field is a structured system of social positions occupied either by individuals or institutions. It is also a system of power relations that exist between these positions (Jenkins 1992, p. 53). Bourdieu describes these power relations in term of four categories of resources (or 'capital') at stake: Economic (buildings, shares, cars,...), social (social connections, knowing influential people,...), cultural (knowledge and skill acquired, credentials,… typically obtained by education), and symbolic (aesthetic taste, paintings,...). All forms of capital are based on economic capital but without necessarily reducible to it.

The spread of Heideggerian phenomenology during the 1970s and the following two decades prepared grounds for a growing interest in place theory in architecture. According to Heidegger, being cannot exist independent of practices of dwelling. Most architecture related phenomenological theory is actually based on this ontology

of dwelling. Both Barthes's semiology and Derrida's deconstruction are useful in theory of place. Place is understood as 'myth' in Barthes's terminology and 'transcendental signified' in Derrida's terminology. A consequence of discursive analysis of discourse of place is the reduction of the 'place' to 'text', stripped of all complications (Dovey, 2008, p. 47).

Unlike Foucalt's conception of discipline based power, Deleuze integrates a conception of power that is based on desire. For Deleuze the fundamental driving force of life is desire. Desires start as flows of life, as events of becoming, before they become identities. Desires become identities and assemblages as they become coded and organised. In this sense, all inhabited places, streets, doors, corridors are products of desire to connect between places. Thus an office with an imposing view at a corner expose desires for status, and a country house suggest desires of detached identities (Dovey 2010, p. 15).

2.2 Political Context of Architecture

Henry Lefebvre, one of the Marxist philosophers of the past century, significantly widened the discourse of space in his influential book, *The Production of Space* (Lefebvre, 1991) by adding a social dimension to space. For Lefebvre space is produced through the dialectics of everyday life. In other words, space does not exist by itself, but it is produced. Lefebvre (1991, p. 227) relates space and power through his Marxist point of view: "Buildings, the homogeneous matrix of capitalist space, successfully combine the object of control by power with the object of commercial exchange."

According to Markus (1993), buildings are first and foremost social entities as they respond to the questions, which we wonder about power, order, classification and function. From its form to its function, to its spatial layout, what makes a building has all got a social meaning. The main role of architecture as far as power is concerned is to deliver political, cultural or religious ideas to built form; "to make visible invisible values, ideology and perspectives" (Findlay 2005, p.201). For Findlay (2005, p.7) an understanding of the strategies power uses to influence, control and possess the space is particularly important. By understanding the strategies of power, she argues, we can then develop counter-strategies to undo coercive spatial practices. She lists four categories of spatial strategies of power: The formation of hierarchies; segregation; marginalisation; and lasting, major instruments of spatial transformation such as colonialism and globalisation.

The primary manifestation of power occurs when social and economic hierarchies are translated into physical and spatial hierarchies. In the example of panopticon, this is achieved through the organisation of space for visual supervision. The architectural design has ensured the requirements of control and order. These transformations are powerful strategies because of the highly invisible manner in which they are integrated in our daily life. There are a variety of spatial forms this power strategy can take place. A person on a raised platform is exercising some sort of power over the audience. The size, height and location of a building are obvious expressions of power. The castle in Franz Kafka's celebrated novel *The Castle* is on top of a high hill, which symbolises the unreachable power. Findlay (2005: 10) stresses also the importance of centrality. For example New York is a centre as far as economy and banking is concerned, and Paris is a centre as far as fashion industry is concerned. The rest of the world becomes peripheral in the exercise of power and hence influence compared to the central power.

2.2.1 British Colonialism

Despite the vast literature on colonialism and imperialism[5], for some scholars (e.g. Horvath, 1972) both terms remain undefined. Although colonialism had its semantic roots in Roman 'colonia', which referred to "Romans who settled in other lands but still retained their citizenship" (Loomba 2005, p. 7, the term colonialism has evolved to mean a wide range of forms and practices. The above definition of colonialism refers only to the Romans (i.e. the 'colonisers'), without any complicating reference to the population who were already living in the land colonised.

The history of colonialism starts with the ancient civilisations, long before the Romans. However, the period of colonialism that coincides with the time span of this thesis has its beginning in the 1870s. The period from 1870 until the beginning of the First World War in 1914, known as the 'second industrial revolution' has witnessed remarkable advances in new technologies which has profoundly transformed the economy of the industrial European countries and the US. The motivation for territorial expansion of European industrial powers, resulting in large overseas empires in the decades following 1870, had a number of factors, including political, economic, strategic, and cultural. Most scholars, however, place the economic factors at top of their list. The economic drives of colonisation by European colonisers included the need for raw materials such as minerals and textile fibres for their industries; to find

[5] Although the colonialism and imperialism are quite related, Edward Said's demarcation between the two terms is particularly helpful: "'imperialism' means the practice, the theory, and the attitudes of a dominating metropolitan center ruling a distant territory; 'colonialism', which is almost always a consequence of imperialism, is the implanting of settlements on distant territory" (Said 1994, p. 9).

new markets to sell their products; to invest in infrastructure such as railways for profit, and to provide new lands for the growing European population.

It was common that Governors serving the British Empire were traditionally trained in classics at the universities of Oxford and Cambridge, and Cyprus was not an exception. As it will be further explored later on, the classics trained Governors in the early decades of British rule favoured the Greek revival style[6] in public buildings constructed. For them "the Greek revival style signified education, culture and history, or at least their understanding of such things' (Given, 2005). This posed a most peculiar and even paradoxical situation, making Cyprus unique among all the colonies of Britain. The British who considered themselves as the descendants of a superior civilization believed that they justified their presence in the colonies of the supposedly primitive or inferior civilizations. Such an attitude was prevalent, for example, in India where "students were taught not only English literature but the inherent superiority of English race" (Said 1994, p. 101). In Cyprus, however, British colonial rulers found that "the majority of the natives were in fact the heirs of that same classical tradition which underlay much of British education and defined British notions of civilisation" (Given, 1997). Under the colonial practice English was the official language of instruction at all schools in the colonies. Cyprus, however, was an exception. Lord Kimberly, the British Secretary of State for the Colonies during the early 1880s, insisted that "Cyprus was a special case and that consequently Cypriots should be taught in one of the two ancient languages of the island." (Morgan 2010, p. 38). Greek

[6] An architectural movement in the first half of 19th century marked by the use of imitation of Greek orders and decorative motifs of ancient Greece.

thinkers such as Aristotle and Plato may have born in Thrace and Athens but their legacy decisively belonged to students of British public schools. This attitude lasted through the end of 1950s. Morgan (2010, p. 39) quotes Paul Griffin, the headmaster of the English School in Nicosia saying "Most Englishmen are culturally Greeks, we are all Philhellenes. I am myself, much as I loved my Turkish pupils". Given (1997) reveals yet another paradox in the teaching of history at schools. Contrary to the rest of colonies, were British history was imposed, the colonial regime in Cyprus encouraged the teaching of Cypriot history at schools.

To sum up the distinctly different British colonial attitude towards Cyprus, one can safely say that the British did not (at least in their first four decades of rule) directly interfere with the educational and cultural matters. Their intention was to bring Cyprus a 'good government', even though as Hook (2009, p. 16) underlines, "good government meant British government, administration, taxation, currency, legal systems, and commerce and trade integrated into its own empire".

2.2.2 Modernisation and Modern Architecture

Modernism refers to an intellectual and philosophical movement in the West during the 18th century reflecting on all forms of art and architecture. If one wants to explore "the idea of modernity", the challenge of estimating the exact onset of its introduction to mankind then resuscitates in its definition and exposition. Heynen (1999, p. 8) defines modernism starting way back from its basic etymologic root, Modern. She, thereafter, maps out the variance of modern, modernity and modernism. The primary definition of the word modern is used to refer to anything "at present, at the time it is made or current" conveying an implication opposite to that of "the notion of earlier, previous or of what is past." The second definition of the word, according to her, is

as the new regards to the former. The term is then started to be used in defining a period which means “at present” in order to differentiate it from the former periods.

Although the routes of modernization dates back around the fifteenth century, the term ‘modernism’ did not appear until the late nineteenth century in the form of art, literature, architecture and music (Lu, 2012, p.233). The movement most commonly encapsulates as a break from tradition. Lu elucidates the architectural discourse of modernism as a culturally and historically formation as interwar modernism and post WWII modernism since they differentiate in terms of expression of modernity in architecture.

In the eighteen and the nineteen centuries, the matrix of modernity is greatly affected by the period of industrialization, political upheavals, and the increasing urbanization, hence becoming far more than just an intellectual concept. The new urban life styles and the growing uncertainties in social standards influenced peoples’ perceptions of traditions and traditional and their values resulting in many changes that were seen and felt on the different levels of modern. This obligates a distinction to be drawn between modernization, modernity, and modernism.

Imperialism has a rather obscure appearance in the discourse of modern architecture. Part of the reason lies in the fact that the connection between imperialism, tradition and the modern is dreadfully complex. Within the colonial setting, the rejection of modernity is often taken as the revival of the tradition. However, such a refusal of modernity based solely on tradition, has been questioned by anticolonialist authors who see no essential link between colonialism and modernity (Crinson 2003, p.3). Hosagrahar (2005, p. 1), on the other hand, sees the emergence of Europe’s modernity

as a consequence of Europe's colonisation of Africa and Asia. For her, "to be 'modern' was the prerogative of European rulers who claimed the right to define its meaning and assert its forms". The definition was simple: To be 'modern' was to be 'not traditional'. Those who were not wholly belonged to either were considered to be 'modernising' in a programmed direction (Hosagrapar 2005, p. 1). In a planned manner the European colonisers have implemented their notion of modernity in a wide range of forms, from cultural and political to economic and educational. As societies gained their political, economic and cultural interdependencies, they produced articulated plurality of modernities (Hosagrahar, 2005, p. 4). The concept and ideal of modern and modernization as oppose to the 'oriental' spread throughout the globe via Europe's notion of colonization.

Since architecture is widely acknowledged as a social production, it should then be shaped by the needs and aspirations of the society. As seen in all mass activities, it should also be dealt with order. One of the pioneering architects of modernism, in America, Lescaze (1937, p. 110), states that the root of the modern architecture is the necessity of functional order.

Modernism which is adopted by many architects and architectural educators has a number of basic characteristics. The concept of interwar modernism after obtaining a global popularity after the Second World War showed its effect on many societies by displaying these basic characteristics. First of all, it is Euro-American and depends on the new technological possibilities regarding materials and economic advancements pertaining to the Western spatial system. Secondly, as in any community based activism and awareness, actions are global and the characteristics of modernism such as the new forms, spatial principles, and technologies are viewed and dealt as a highly

significant matter that no society could escape. Modernist architecture denied traditional limitations and restrictions and gave a new face to decoration. It changed the conception of space and time by dividing the components into modules and by materializing the modern modes of living, thinking, and production based on rationality, efficiency, calculation, and the obsession with novelty and abstraction. Fourth, by looking at the practices of the majority of the modernist architects, such as their design of furniture, house, street or the planning of the whole city, the sharing of the advancing social and political goals are visibly seen by looking at the moral assertions of the it is easily observed that. (Lu, 2012, p.233).

The roots of modern architecture in the island lies mainly on the presence of the British (Feroes and Phokaides, 2006). In addition, the Turkish Cypriot community embraced modernity in admiration of Atatürk's westernized Turkey. The nationalist movements which peaked with the declaration of the Second Constitution in 1908 persevered until 1930. During this period, the architectural style was strongly influenced by Turkish nationalism, as the renowned architects of the period exercised revival of classical Ottoman architectural elements in their works. The public buildings were given a new look. A new architectural style emerged, which embodied both ideological and cultural convolutions of the former empire. Ottoman revivalism dominated architectural discourse and practice in Turkey until 1930's. Governmental and public buildings reflected this National Style which was realised by using elements of Seljukid and Ottoman styles. The idea was to implement decorative elements originated in classical Ottoman architecture, such as wide roof overhangs with supporting brackets, pointed arches, to the beaux-arts design principles (symmetry, axiality) and new construction techniques, such as reinforced concrete. This style was used broadly for buildings like banks, offices, cinemas, and other public buildings, just

like the Gothic revivals in Europe. This new style, which can be considered as the "National Architecture Renaissance" architectural historians ignored it, mainly concentrating on the sixteenth-century classical period. Many of them regarded Ottoman revivalism as too Westernized, stylized and modernized which was not found proper to include in discussions within Ottoman traditions which were considered to be "pure" and "authentic" (Bozdoğan, 2001). The National Architecture Renaissance can be considered as the first 'modern' discourse in the architectural culture of Turkey. During this period, Turkish architects were engaged with new building types and construction methods. For the first time they were involved in identity as well as nation constructing, which lasted until the Republic was established. This period is referred to as the "First National Style".

Towards the end of 1920s the National Architectural style has transformed dramatically into a Westernized form. An ambiguous style emerged consisting of modern functions as well as features from Ottoman past. Western architectural styles appeared in Ankara through the designs of foreign architects, parallel to the prevailing national style. Soon this new style with its simplicity and rationalism in contrast to the historicism of national style began to give Ankara a new outlook. The buildings in this period had a mixture of styles with occasional nationalist architectural elements. Turkish architects were after modernity aspiring to be a part of Western civilization, keeping the traditions and national values at the same time. 1930s policy was to maintain a close contact with the West with the aim of westernisation through social revolutions. In this period, architecture was also influenced by modern Western forms.

2.2.3 Nationalism

Nationalism has attracted much scholarly attention because it is still a driving force in politics. For most scholars of nationalism it is rather difficult (if not impossible) to

give an objective definition for nationalism that works successfully for all purposes. According to Wittgenstein (1958, p. 20), "the meaning of a word is its use in the language". However, the usage of the term "nationalism" is itself ambiguous, and thus far from being clear. The criteria used in the definition of nationalism, are themselves fuzzy concepts difficult to define (Hobsbawm 1992, p.6). The fact that different authors use the key concepts such as "nation", "nationalism", "ethnicity", and "identity" adds further complications. Numerous diverse theories of nationalism exist, making nationalism difficult to study under a unified theory. The debate whether nations are invented or grew out of ethnic groups still continues.[7]

According to Kedourie, a leading scholar of nationalism, "nationalism" is "a doctrine invented in Europe" around the beginning of the 19th century. The doctrine holds that humanity is divided into nations which have certain characteristics, and that national self-government is the only legitimate type of government (Kedouri 1961, p. 9). For Gellner (1983, p.1) nationalism is a political principle; it is a theory of political legitimacy. Nationalism draws on cultural traditions and ethnicity, but according to Callhoun (1997, p. 123), "neither its form nor its historically specific prevalence in the modern era is explained by these factors". For a practical understanding of nationalism, Anderson (2006, p.5) believes that it is more helpful to treat the term in parallel with "kinship" and "religion", in place of an ideology such as "liberalism" and "fascism".

[7] For a detailed study see Anderson (2006), Calhoun (1997), Gellner (1983), Hobsbawm (1992), Kedouri (1961), and Smith (1991, 1999, 2008).

Anderson (2006) defines “nation” as an “imagined political community”, basing his arguments on anthropological arguments. For him nation is “imagined” because the members of a nation do not know most of their fellow members but what they have in their minds is the image of their communion (Anderson 2006, p. 6). In contrast, Smith defines “nation” as “a named human population sharing an historic territory, common myths and historical memories, a mass, public culture, a common economy and common legal rights and duties for all members” (Smith 1991, p.14). This definition of Smith is based on several basic features of “national identity”, which includes an historic territory (or homeland), and common myths, memories, culture, legal rights, and duties (Smith 1991, p.14).

One form of nationalism which is relevant in Cyprus studies, is the “ethnic nationalism” where the concept of a “nation” is defined in terms of “ethnicity”. Smith defines ethnic communities as groups of people having certain common attributes including an identifying name, a myth of common ancestry, shared memories, and culture (Smith 1999, p. 13). A basic principle of ethnic nationalism is that ethnic groups can be clearly and explicitly identified. Each ethnic group has the right of self-determination.

One of the crucial building blocks of nation building is “national identity. “An identity is created and imposed on people to encourage them see and think themselves in a similar way” (Şahin 2008, p. 20). National identity is formed by various social practices like politics, education, religion, etc. Through common education, the state itself has a leading role in the construction of national identity. Ergut (1999) accepting buildings as social objects, has argued that architecture can be considered as a “field” (as defined by Bourdieu) which functions through the development of nation-building.

According to Kusno (2012, p. 213) architecture is associated with nationalism when "its semiotic functioning organizes solidarities for a limited sovereign community as well as distinguishing the community from 'outsiders'". The power of architecture to accomplish such a role of domination for the nation, he argues, relies not only on the ways in which architecture is formed, but also on how it is "imagined, received and ignored collectively". Architecture thus have the capacity to transform the structure within which meanings are shaped. According to Ergut (1999), nationality divisions of the world are also reflected in architectural design, buildings express national implications, therefore carry national identity.

Scholarly interest on the relation between nationalism and architecture is mainly focused on the national discourse on architectural modernism and the romantic regionalism with little concern on the relation between these movements (Kusno 2011, p. 215). Barbara Miller Lane (1968), Anthony King (1976, 2004), and Diane Ghirardo (1980) have outlined the relation between architecture and nationalism as it developed to accommodate the nationalism's fascist ideology during the Nazi period. Using an interdisciplinary approach a new generation of architectural historians such as James Holston (1989), Lawrence Vale (1992), Nezar AlSayyad (1992) and Sibel Bozdoğan (2001), brought a new insight into an understanding of the construction of national identities from a (post)colonial perspective.

Benedict Anderson's (2006) central idea of national representation in his *Imagined Communities* (First edition 1983) has been particularly influential on the younger generations of architectural historians. He pictured representation not simply as "visual and textual, but also spatial and architectural" (Kusno 2012, p. 215). It is natural to imagine that the spatial and formal configuration of architecture in some

means of semiotic arrangement may shape identity. Architecture then describes the nation under a particular political regime.

2.3 Education, School and Schooling

Education starts at the very beginning of life and continues to the very last day of our lives. In the course of time the ways of teaching and the learning environments have undergone a substantial transformation. Although it differs from country to country, the importance given to education dates back to ancient times. For Plato, ideal city should consist of individuals who had an ideal education.

Education is a process comprising the collection and codification of experience which forms the basis of learning, and the recording and transmission of experience which forms the basis of teaching (Hamilton and Zufiaurre 2013, p. 3). Schooling has a different function than education in that it tries to minimize the human shortcomings in education. It is a formalised version of education, it relies on educational practices of expected outcomes which are transferable and repeatable. In education, the "teacher" can be anyone (e.g. parents) but in schooling the "schoolteacher" is an agent of an authority, empowered to exercise power. After the 8th century the word "school" started to be linked with textualization of knowledge, a process that "initated the separation of education from schooling" (Hamilton, 2015).

The first ever school is not known but it is believed that the idea of gathering pupils into one defined space for education was present in medieval Europe. Morgan's (1998, p. 28) work, however, concludes that there is not a single archaeological site from the classical period which can even tentatively be identifiable as a school room. Little existing evidence regarding the medieval school room indicates that it had no special

facilities. The earliest purpose-built school building in history was built in 1384 in Winchester, England (Seaborn, 1971, p. 2; Hamilton, 2015). Based on the research of Orme (2006), Hamilton (2015) also reports that the earliest "detailed evidence" of a schoolroom is 1518, the earliest school timetables dates from 1528-1530, and that the division of school into classes is not mentioned before 1520s.

Towards the end of the 17th century Quakers in England had established "workhouses" which acted as educational institutions as well as a factory or a retail shop. In these workhouses, such as the College of Industry which was established in 1696, poor children were taught, arithmetic, reading and writing, beside trading skills and religion. A century later charity schools became a major form of educational institutions. Westminster, established in 1688, can be considered as a prototype of such schools. A typical charity school was comprised of a boys' schoolroom, a girls' schoolroom, a master's and a matron's lodging (Seaborne 1971). In larger urban schools there was also a great hall (or chapel) for religious practices. By the middle of the 18th century "industrial schools", training boys in blacksmithing, shoemaking, agriculture, and girls in spinning, knitting and sewing became quite popular in England and Scotland (Markus 1993, p. 44). In a rather paradoxical manner, the number of industrial schools were decayed with increased industrialisation. In England, with the New Poor Law of 1834 industrial schools were replaced by workhouse schools. Such a transformation also took place in the continental Europe.

The industrial and agrarian revolutions which took place in the 18^{th} and 19^{th} centuries caused striking social, cultural, economic, and technological changes. These changes led to dramatic increases in agricultural and industrial production, resulting in a surplus in state revenues. The introduction of mechanisation has re-established concepts such

as class, childhood, family, gender, discipline, religion, all of which had an impact on new schools. These new schools which emerged from the growing urban proletariat, marked a diversion from the existing elite military colleges and other schools. In these schools order, harmony and virtue were central values, and "every shade of politics and religion was involved" (Markus 1993, p. 41). One of the most characteristic features of this period is the emergence of mass education. What was an exceptional practice became common for parents to send their children to school, particularly in Northern Europe and North America (Westberg, 2015). State controlled schooling substituted that offered either privately or by religious authorities. Compulsory education was introduced in Prussia in 1763, Denmark in 1814, Sweden in 1842, Norway in 1848, United Kingdom in 1880, France in 1882, and Belgium in 1914 (Soysal and Strang, 1987). According to Baker (2012) it is a fundamental responsibility of a democratic society to provide public education and appropriate environments which does not solely form the way of teaching but delivers icons and symbols of the values possessed in a society.

A major challenge at the turn of 19th century was the inexpensive provision of mass education. Joseph Lancaster's school in London (1789) was a breakthrough in delivering education at a low cost. The school had a thousand students but no adult teachers besides Lancaster himself. Lancaster had relied on monitors selected from senior students who tutored students in reading, writing and simple arithmetic. The spatial requirement for this model of education was a single huge, high-ceilinged room. Tall classrooms helped the ventilation and provided better day lighting. Long desks were arranged in arrays at the middle of the room, all directed towards the master who sat at a higher desk, and the monitors were placed at ends of rows (Figure 2.2). On one aisle, "teaching stations" consisting of semi-circular desks were placed for

groups of students to watced their lesson material hanged on the wall, while instructed by monitors (Steadman 2014, p. 133).

Figure 2.2. An illustration of Lancaster's classroom, 1881 (Markus, 1993, p. 57)

With the growth of student numbers, towards the end of the 19th century, the Lancasterian schoolroom was evolved into schools with several rooms and a central hall (Figure 2.3). The critical concept behind the central hall was supervision (Steadman 2014, p. 137). The central hall provided the headmasters an opportunity to supervise the pupil-teachers who continued to be the major teaching force. Classroom doors had glazed windows allowing the headmaster to see what is happening inside the classroom and interfere if the pupil-teachers lost the control of the class. The central hall also played the storehouse role of fresh air during the breaks. The Idadi, built in 1896 in Nicosia, is one of the earliest examples of such school buildings in Cyprus (see sections 3.3.1 and 7.3).

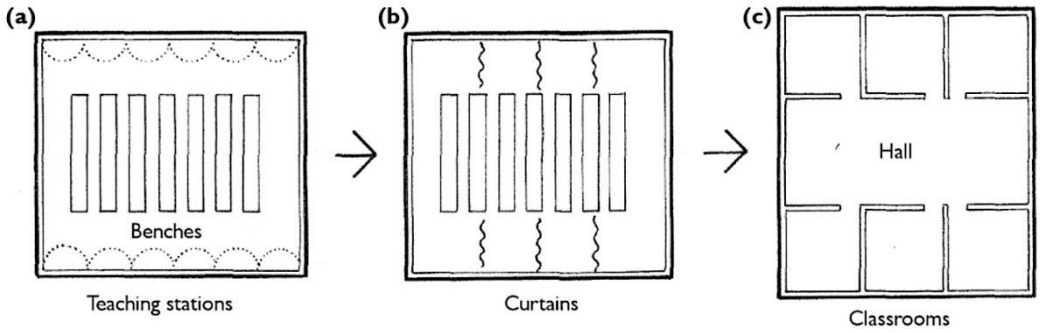


Figure 2.3. The evolution of central hall from Lancastrian schoolroom (from Steadman 2014, p. 137).

Plans of school buildings normally feature the school environment without referring to the social dimension, such as the organization of student activities. That a categorisation of school building layouts with respect to the temporal evolution of educational philosophies is possible has been argued by Paşalar (2003, p. 6), basing her argument on the spatial zoning and classifications of Perkins (2001). According to Perkins (2001, p. 63) school environments are shaped by factors that include the entry sequence, school size, teaching methodologies, efficiency and cost, natural light, and site access. Using circulation and functional distribution of educational spaces as the basic underlying concepts, Perkins (2001, pp. 64-68) has demonstrated that school building configurations can be combined into a few simple spatial organisations (Figure 2.4). Most common configurations are:

- Centralised resources with double-loaded classroom wings.
- Dumbbell double-loaded classroom wings.
- Courtyard with double-loaded classroom wings.
- Spine with double-loaded classrooms.
- Centralised resources with single-loaded classrooms.
- Spine with single-loaded classroom wing.
- Centralised resources with classroom clustering.

- Dumbbell with classroom clustering.
- Courtyard with classroom clustering.
- Campus plan.
- Multigrade campuses.
- Compact urban.

Although these are regarded as the most widespread configurations, their impact on users, and their functionality for different educational practices, can vary through different cultures and periods of time.

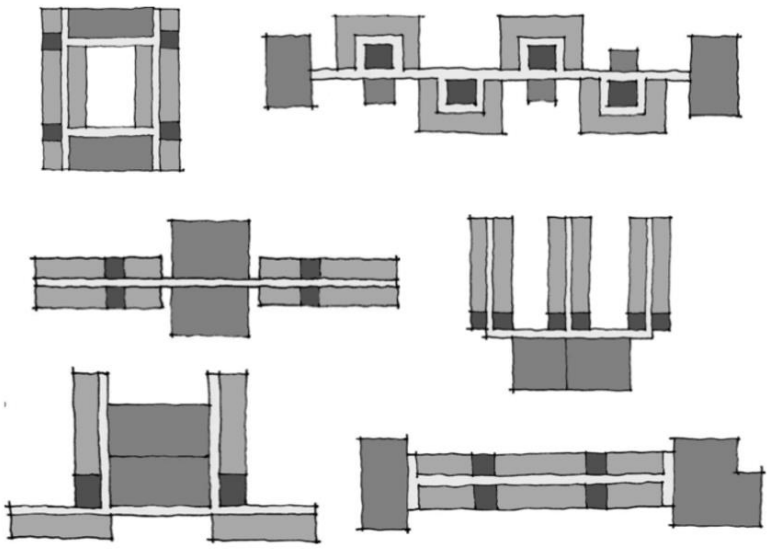


Figure 2.4. Most common spatial layouts of school buildings according to Perkins (2001, pp. 64-68).

According to Benito (2003), what relies behind the logic of a particular school design is twofold. First, it responds to institutional architecture and social/cultural calls for order, control, and functionality. This is what inspired Foucault to associate a pattern in panopticon to systematise discipline in various functions. Second, it reflects the pedagogical discourse and the school culture at the time they were designed.

Chapter 3

SCHOOL BUILDINGS OF EARLY BRITISH RULE UNTIL 1931

3.1 Political History of Cyprus

3.1.1 Pre-Ottoman period

Located centrally at the crossroads of European and Middle Eastern civilizations, Cyprus has been one of the most important meeting places in world history. The earliest settlements date from the sixth millennium BC (Maier, 1968). Cyprus became a Roman province in 58 BC until the split of the Roman Empire in 330 AD. Cyprus then came under Byzantium, the Eastern Roman Empire, for almost 900 years.

In 1191 the island was conquered by Richard Coeur de Lion, on the route to his third Crusade. A year later, Richard sold the island to Knights Templar, who resold it to Guy de Lusignan, the crusader King of Jordan, in 1192. The French Lusignan rule lasted until 1464. During this period two cathedrals, numerous churches and monasteries were built in the French Gothic style. After the loss of Acre in 1291, Cyprus became the new frontier of Latin expansion in Eastern Mediterranean (Jacoby, 1989, p.146) and Cyprus (in particular Famagusta) flourished in importance and wealth. New immigrants from Near East and Europe contributed to the cosmopolitan character of the main cities. Famagusta soon became the "centre of the entire Levant trade" (Maier, 1968, p. 88), "the obligatory *entrepôt* for all transactions between west and east" (Enlart, 1978, p. 210).

> Here, in the security of the most frequented port of eastern Mediterranean, the bankers and merchants of Genoa, Venice, Pisa, Florence, Barcelona and Montpellier set up their head offices, Syrian firms established new branches. Famagusta's trade links reached far beyond the Near East, Persia, India, Siberia and China (Maier 1968, p. 88).

For a brief period during the 14th century, Famagusta was comparable to Venice and Constantinople (Walsh, 2008). Ludolf von Suchen, who visited the island between 1336 and 1341 described Famagusta as "the richest of all cities, and her citizens are the richest of men" (Cobham, 1908, p. 18). von Suchen was astounded by the jewels at a bride's headdress which were "more precious than all the ornaments of the Queen of France" (Cobham, 1908, p. 19).

> Sir Francis built the Nestorian church at Famagusta from its foundations entirely from his own pocket. One day, in a single stroke of business, he made 30,000 gold ducats and sent 10,000 to King Peter I as a gift. Another merchant from that island, Stephen de Lusignan, was able in one voyage from Syria to Cyprus with three ships to make so much profit that with one-third of his gains he could build the church of St. Peter and St. Paul, a superb edifice in Famagusta (Atiya, 1962, p. 172).

This richness has been reflected in construction of buildings and churches which were fine examples of French Gothic architecture. By the middle of the 14th century there were 365 churches in the city, 'one for every day of the year' (Starkweather, 2009). The Italian pilgrim Nicholas Martoni who visited Famagusta in 1394 was impressed by the walls of the city: "... [Famagusta] has finer walls than any town, high with broad alleys round them, and many and high towers all round" (Jeffery, 1918, p. 102).

In 1373 the Genoese occupied Famagusta and kept under their control until 1464, despite several attempts by the kings of Cyprus to recapture it. Under the Genoese the city underwent rapid economic decline. Venetians stopped trading with Cyprus, and

Catalans redirected their trade through the Barcelona – Rhodes – Alexandria route (Walsh, 2008). Jeffery (1918, p. 103) remarks that "not a single monument of importance can be identified with any certainty as belonging to the period of Genoese occupation."

In 1464 the Genoese departed, and the Venetian became the new rulers of Famagusta, and soon after the whole island. The Venetian rule lasted almost a century until the Ottomans conquered the Island in 1571. Although the Venetians tried hard to regain the position of prominence that Cyprus had once enjoyed as a successor to Acre, they did not succeed. They started by fortifying the walls and adding a citadel in Famagusta (often associated with Shakespeare's work Othello) to improve the defence of the harbour. The monasteries were converted into barracks (Enlart, 1987, 212), and the city soon became the military base of the island. They added triangular bastions to the walls of Nicosia, using the latest engineering knowledge from Italy.

Most of our knowledge about this period is derived from the accounts of travelling merchants and missionaries passing through. Claude Cobham, a British Commissioner in Cyprus at the beginning of the 20th century, collected all relevant passages from such chronicles and translated them into English (Cobham, 1908). The collection, titled *Excerpta Cypria*, remains one of the most useful sources for scholars of Cyprus studies. Edbury (1991) provided a scholarly written history of Cyprus for the period starting from the conquest of the island in 1191 by Richard I of England until 1373, the Genoese occupation of Famagusta.

3.1.2 The Ottoman Period

Turks captured Famagusta in 1571 after a year-long siege thus completing the conquest of Cyprus. In the following three centuries, the capital city Nicosia grew in

importance while the rich Famagusta lost its significance. The walled city was mainly used as a prison by the Ottomans. No Christians were allowed to live within the walled city; they were only allowed to enter the city on foot (Enlart, 1987, p. 212; Jeffery, 1918, p. 104). Larnaca replaced Famagusta as the main port of the island.

After the conquest the Ottomans brought a sizable Turkish population from Anatolia and established the *millet* system just like in all Ottoman provinces. It was based on an economical system which allowed a freedom of religion and also communal autonomy as long as the *millet* leaders assured that their communities were loyal to the local government.[8] The religious boundary divided the population as Muslims and non-Muslims (*zimmi*s). This distinction also implied a differential tax and trial standards (Demetriou, 2008). A number of local people were converted into Islam (for the reason of being released from taxes) and they were given political posts. After the Ottoman occupation the Latin elite were given freedom to emigrate and soon they were disappeared from Cyprus. The Orthodox Church was recognised as the only recognised Christian authority and was given considerable power. The ruling class was now composed of Turkish and Greek elites. In can be safely maintained that an ethno-religious plurality, a peaceful coexistence between the multiple communities, existed throughout the Ottoman period.

The Ottomans restored and fortified the damaged city walls soon after the conquest. The two cathedrals in Nicosia and Famagusta, together with several churches were converted into mosques. New educational institutions were established in the vicinity

[8] For a detailed account of the *millet* system see K. H. Karpat, *Studies on Ottoman Social and Political History: Selected Articles and Essays*, (Leiden, Brill, 2002).

of mosques. The religious and charitable foundations (*vakıf* or *evkaf* for plural) established by the Sultan and the conquering pashas were largely responsible for a sustainable economic and social development of the Island, and constructions of such buildings as Kumarcılar Hanı, Büyük Han as well as Mevlevi Tekkesi, public baths and fountains in Nicosia (Özgüven, 2004).

During the Ottoman occupation new educational institutions were established within the vicinity of mosques. The religious and charitable foundations (*vakıf* or *evkaf* for plural) established by the Sultan and the conquering pashas were largely responsible for sustainable economic and social development of the island. Initially the British did not implement major changes in the structure of the administration. The Sultan had the right to appoint the *müftü* (chief religious person) and the *başkadı* (chief religious judge) and an inspector for the Turkish community's education. After Cyprus became a Crown Colony, the British infiltrated into Greek and Turkish Cypriot institutions, most importantly the *Evkaf*, eventually obtaining the control of it through major reformations.

Most European accounts of Cyprus during the Ottoman period are, however, rather discriminating. The British historian Harry Luke while praising the Lusignan and Venetian periods as "the most brilliant epoch" in the history of Cyprus, he considers the Ottoman period as "a story of provincialism and decay, of contracting commerce and unenterprising administration" (Luke, 1921, pp. 1-2). Some accounts even reduce the period to a story of Ottoman oppression of the Greeks. It was, as Clarke and Varnava (2013) puts it, "a period of domination by Muslim and Christian ruling elite over a Cristian and Muslim peasantry."

3.1.3 British Colonial Period

In 1878 British arrived Cyprus to "occupy and administer" Cyprus in return for offering protection to Ottoman Empire from Russian expansionist aspirations (Clarke and Varnava, 2013). The 1878 Anglo-Turkish Convention of the British occupation was such that Cyprus would stay a part of the Ottoman Empire and Britain would pay part of the excess revenue of the Island as 'rent'. The British imposed heavy taxes to cover the rent which was agreed to be £92,000 per annum.

During the Ottoman occupation new educational institutions were established in the vicinity of mosques. The religious and charitable foundations (*vakıf* or *evkaf* for plural) established by the Sultan and the conquering pashas were largely responsible for a sustainable economic and social development of the Island. Initially the British did not implement major changes in the structure of the administration. On the insistence of the Ottoman Sultan some articles were added to the Convention to protect the rights of the Turkish community in Cyprus. These included the right for the Sultan to appoint the *müftü* (chief religious person) and the *başkadı* (chief religious judge) and an inspector for the Turkish community's education. Again according to the Convention, the Sultan retained his power over *The Evkaf*, now to be managed by a Turkish Cypriot and an English officer, having the right to sell and lease lands (Bouleti, 2011). After Cyprus became a Crown Colony in 1925, the British infiltrated into Greek and Turkish Cypriot institutions, most importantly the *Evkaf*, eventually obtaining the control of it through major reformations.

When the Ottoman Empire sided with the Germans in the First World War, the British reacted by annexing the Island in 1914. Under the 1923 Lausanne Treaty, the newly formed Republic of Turkey recognised the British sovereignty of the Island. Soon

after, Britain declared Cyprus a ‘Crown Colony’ in 1925. Cyprus was a strategic link connecting the empire. The trade route connecting India – Aden – Suez – Cyprus – Malta – Gibraltar became the major route of British world trade (Panayitopoulos, 1999). Spreading all over the world, from Canada to Australia, the British Empire was then the largest empire and strongest colonial power in the world. Such a vast empire could not be ruled centrally, and in the case of Cyprus, the Governor of the Island was the sole authority.

After Cyprus became a Crown Colony, the colonial regime tried to colonize the Island through the institutions of both Greek and Turkish communities. The Orthodox Church was deprived from some of its powers including the right to collect tax. Hook (2009) argues that ‘British Cyprus’ was in the Imperial mind even in July 1878, as British perceived Cyprus as a ‘blank slate’ or an open island which could become British under Britain's “good government policies”, based on the assumptions of the superiority of its own Christian white race. They intended to create a ‘British Cyprus’ having integrated into trade and commerce of the Empire, with the expectation of the island remaining as a colony, best strategically located link in Britain's chain of Mediterranean possessions. They brought their own soldiers, administrators, commissioners, engineers, clergy and families to Cyprus and created a distinct community, who integrated only with Cypriot servants and merchants as separate classes. In addition to the economic aspect of the colonialization, the concept of ‘Britishness’, the “cardinal British institutions” which are the “tea, tubs, sanitary appliances, lawn tennis and churches” (Pemble, 1987, p. 45) was imposed on the island by establishing a British community. The Cypriot community encountered by British was, however, consisted of a ‘plural society’, a term first used by J.S. Furnivall for the natives of Burma, another British colony, to describe the peoples of a society who

"mix but do not combine" (Hook, 2009, p. 7). They had different nationalities, religions and languages, as well as customs and class, yet they both were different from British.

3.2 Educational Policies in the Early British Rule

Both Greek and Turkish Cypriots traditionally attached much value to education. In the spirit of Bourdieu, it can be reasoned that those who were educated had acquired substantial 'cultural capital'. Bryant argues that for Cypriots education meant more than that: "Becoming a 'true' Greek or a 'true' Turk was something achieved through education" (Bryant, 2004, p.127). Moreover, the Greek and Turkish Cypriots realised that schools were essential to their nationalistic visions 'not because of the nationalist histories that the schools taught but because of the way in which those histories were oriented towards the future through the moral discipline of a patriotic life' (Bryant, 2004, p. 158). Weir, one of the earliest authors on education in Cyprus, writes that Cypriots have an implicit trust in education. 'He has not been educated' amounts, Weir observes 'to explain almost any failure of all but the best educated persons.' (Weir, 1952, p. xv) Underlining the importance of education as an agent of diffusing urban values, Demetriades maintains that the Cypriot leaders 'saw education as an important vehicle for spreading nationalism' (Demetriades, 1985, p. 33). The oral history of Cyprus is abundant with stories of families selling their last piece of land in order to support the education of their children.

During the Ottoman rule the education of the Moslem population at the primary level was carried at *Sıbyan* schools. These schools were either supported by pious foundations (vakıf) or private. Following the religious tradition, students were enrolled

to these schools with a ceremony whose grandeur depended on the family's wealth, when they were four years, four months, and four days old.

When British arrived in Cyprus the population was around 186,000, of which 137,000 were (Greek) Orthodox Christian and 45,000 were Turkish (Moslem) (Hutchinson and Cobham 1907, p. 51). At the same time, there were 83 Greek and 65 Turkish elementary schools (Weir 1952, p. 21). Table 3.1 shows the distribution of these schools among the six districts. The Armenian and Maronite minorities had five and four schools respectively (Talbot and Cape 1914, p. 7). Despite the growing secularisation of education, the distinct ethnic segregation between the Greek and Turkish schools was preserved from the beginning of the British occupation. According to Lang (2012, p. 92) it was logical to let Greek and Turkish Cypriots having their own schools during the Ottoman rule because education then was not secular and run by churches and mosques, concentrating on religious instruction.

A distinct separation between the Greek and Turkish schools was ensured from the beginning of the British occupation of Cyprus. Two separate Boards of Education were established in 1881 (Weir 1952, p. 24). The Education Laws of 1895, 1897, 1905 and 1906 further shaped the Boards of Education. The 'Board of Education for Moslem Schools', which oversaw matters related only with the Moslem Turkish schools, was comprised of the Chief Secretary, the *Başkadı*, the *Müftü*, a member appointed by *Evkaf*, and six Moslems elected by the District Committees. The (British) Director of Education (then called the Inspector of Schools) had the right to be present at the meetings (Hutchinson and Cobham 1907, p. 75). Among the duties of the Board (elected every two years) were to set the school curriculum, make regulations for school teachers, and decide which elementary schools to be established in villages. All

six districts of the Island had separate Christian and Moslem ‘District Committees for Schools’, and in every village where there existed a school ‘Village School Committee’ elected by tax-paying population. The Village Committees had the authority to appoint and dismiss teachers and fix their salaries, and asses the village contribution. Religious and national holidays of Greek and Turkish communities were fixed by the respective Boards of Education (Department of Education, 1933, p. 3).

Each community had separate schools and teachers of their own, and the curricula were largely taken from Greece or Turkey. Consequently instead of British or Cypriot history, Greek or Turkish history was taught in schools. The British intervention on educational matters was rather mild until the island became a British colony in 1925. The underlying reasons behind this attitude was twofold: First the British did not want to offend the Ottomans by violating the existing system of an already segregated education, and second the administration was reluctant to increase the financial burden by establishing a new infrastructure for education.

Table 3.1. Distribution of population in Cyprus according the 1881 census (Cyprus Blue Book 1887 – 88) and the number of elementary schools (Weir 1952).

District	Moslem (Turkish) Population	Number of Moslem (Turkish) schools	Christian (Greek) population	Number of Christian (Greek) schools
Nicosia	12,662	28	43,065	21
Larnaca	5,317	8	14,624	12
Famagusta	9,449	8	28,693	10
Limassol	5,859	4	22,472	20
Paphos	9,454	12	18,934	12
Kyrenia	2,672	5	9,893	8

Around the first decade of the 20th century there were only two Turkish secondary schools, the İdadi Boys' School and the Victoria Girls' School, both in the capital Nicosia. The Greek high schools outnumbered the Turkish ones: Three at Nicosia, and one each at Larnaca, Limassol, Famagusta, and Paphos. In addition there were two private 'English' schools (Hutchinson and Cobham 1907, p. 76).

Talbot and Cape (1914, p. 29) reported that the curriculum at Turkish primary schools until the beginning of twentieth century was solely religious studies which included learning to recite the Quran by heart. By the time of their report a new secular curriculum, based on the one in force in Turkey, which included reading, writing, algebra, and geography was decisively in practice.[9] In addition to these subjects Ottoman history and hygiene were taught in the highest class. Turkish girls were

[9] For a detailed account of the late Ottoman primary and secondary education see Fortna (2002).

normally did not attend the mixed schools after the age of eight. Talbot and Cape (1914, p. 30) reported that there were eight separate girls' schools, one each at six district towns, and two at villages. The curriculum at these schools was similar to boys' schools but included teaching of embroidery. Turkish Cypriot schools closely followed the curriculum in Turkey until the British interference in 1930s (Department of Education, 1933, p. 3).

Thus unlike other British colonies, Cyprus enjoyed considerable autonomy on educational matters from the beginning. When one of the earliest governors, Sir Robert Biddulph (1879 – 1886) actively promoted an educational system entirely in English just like the British policy applied in India, the Secretary of State for the Colonies, Lord Kimberly, decisively ordered Biddulph to let Greek and Turkish Cypriots have education in their own languages (Given, 1997). This attitude was in contrast with the British policy in other colonies, such as in India, where English was taught at schools because Sanskrit and other vernacular languages were not adequate to transmit the superior knowledge of the Europeans (Adas, 1989, pp. 280-281). Colonialism was not just a vehicle of exporting Western technology but also a medium through which European ideals were integrated. In India, as in other colonies, this led the colonised to regard Western education as something progressive and economic development would be possible with the advanced European knowledge. Such a background even inspired the Indian reformer Raja Ram Mohan Roy to write to the British Governor Lord Amherst that "a government policy of support for Sanskrit and Arabic-Persian education would serve to keep [India] in darkness" (Loomba 2005, p. 24).

By the 1930-31 school year the number of Turkish Cypriot primary schools have increased to 268, while the number of middle/high schools remained two. During the

same school year the total number of students were below ten thousand (Feridun, 2011, p. 473). The growth of the number of Turkish Cypriot primary schools and student numbers for the years between 1900 and 1930 are given in Table 3.2.

Table 3.2. Turkish Cypriot Schools and student numbers between the years 1900 and 1930 (Source: Feridun, 2011, pp. 470-473).

Year	**No. of primary schools**	**Number of students**			**No. of secondary schools**	**Number of students**		
		Girls	Boys	Total		Girls	Boys	Total
1900- 01	145	1532	3599	5131	1	-	90	90
1905-06	169	1571	3550	5121	2	105	102	207
1910-11	187	2111	3664	5775	2	21	50	71
1915-16	207	2751	4071	6822	2	37	135	172
1920-21	235	3423	4919	8342	2	95	158	253
1925-26	270	3547	5057	8604	2	86	144	230
1930-31	268	3531	5303	8834	2	268	287	555

3.3 School Buildings from the Early British Period

The 1895 and 1897 Laws of Education allowed Greek and Turkish Cypriots to have separate educational organisations and granted considerable autonomy. Each community had separate schools and teachers of their own, and the curricula were largely taken from Greece or Turkey. Consequently instead of British or Cypriot history, Greek or Turkish history was taught in schools. The Greek Cypriot schools nurtured Hellenic nationalism with the support of British Philhellenic Governors, whereas the Turkish Cypriots were not as much concerned with nationalism until the establishment of the Republic of Turkey in 1923.

It was in such a favourable setting that Greek nationalism found expression in school buildings. During the early 1920s Theodoros Fotiades (1878 – 1952), a Greek Cypriot architect became responsible for an emerging archetype of Greek schools in Greek revival style, fostering the Greek Cypriot nationalism. Even a few Turkish schools were built in this model, because of the unavailability of Turkish Cypriot architects and also due to the convenience of the Public Works Department (PWD), the colonial authority responsible for public buildings.

3.3.1 The *Idadi*: First Turkish Cypriot Secondary School

One of the first Turkish Cypriot schools built by the British was the Nicosia *idadi* (senior high school). It was designed and built in 1896 by the Public Works Department (PWD) on the premises of *rüştiye* (junior high school), a mud-brick Ottoman building dating from 1863. It was funded by the British on the condition that 'the Turkish Cypriot Board of Education should not interfere in the plan of the building' (Given 1997, p. 66). *Rüştiye* was the only Turkish Cypriot school for boys in the island at a level above the elementary school. Like the Turkish Cypriot elementary schools, its curriculum was of a highly religious character. Classrooms were often square in shape, allowing students to sit on the floor around the teacher. They framed a hierarchical order between teacher and student where "the gaze of authority works to produce a normalised and disciplined subject" (Dovey and Fisher, 2014). The school is located virtually next to the Selimiye Mosque (formerly St. Sophia Cathedral), thus, allowing easy travel for the teachers and students to attend the Friday prayers. By 1894 the *Rüştiye* building was in such a dilapidated state, largely because of negligence and lack of maintenance, that it had to be demolished (Bryant 2004, p. 111) and the students had to continue their studies in a nearby house. Thereafter, student numbers dropped from 121 in 1892 to 90 in 1894, and to 67 in 1896 (Cyprus Blue Books, 1892,

p. 286; 1894, p. 286; 1896, p. 270). The *idadi* was an attempt by the Moslem Education Board to create a school more advanced than *rüştiye*, yet similar to those *idadi*s established in the Ottoman Empire thirty years back, whose graduates would get a direct admittance to the University of Istanbul. A new headmaster was appointed and the new curriculum of the *Idadi* included Turkish language and literature, English, Greek, world history, geography, algebra, geometry, natural sciences, chemistry, drawing, logic, Ottoman law and accounting (Bryant 2004, p. 112). This was almost identical with the curriculum in Turkey with the exception of English and Greek replacing French. The school was named *Sultani* in 1920, and Islamic Lycée in 1926 (Behçet, 1969, p. 52). In 1924 the *Sultani* was recognized by Turkey as equivalent to Turkish Lycée, granting the graduates direct entry to Turkish Universities (Feridun, 2011, p. 335). The school functioned under different names and until 1944 remained the only Turkish high school on the island (Süha 1971, p. 241). Like all British public buildings of the time, it was built using local sand stone, which was easily available, durable, and suitable for the Mediterranean climate.

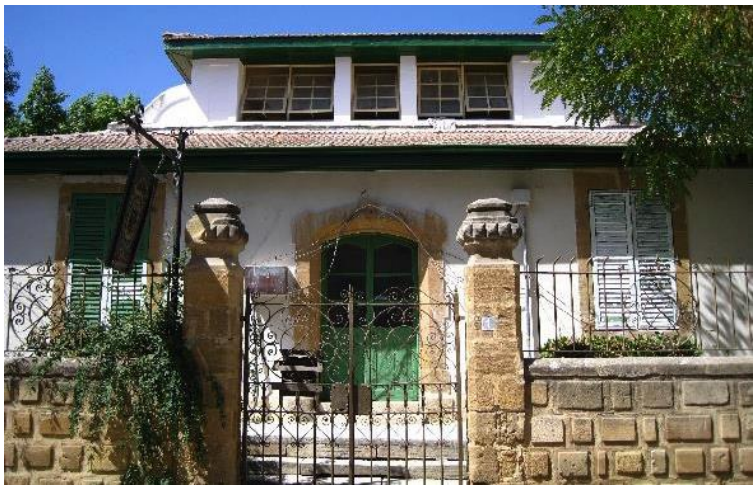


Figure 3.1. The front view of the *Idadi* School.

The façade has an entrance with a rather common segmented arch and rectangular windows with keystones (Figure 3.1). The headmaster's office and a room for school

children to leave their shoes are located on the left and right wings of the single entrance, providing an additional control over entry and exit. The removal of the shoes, as in entering mosques, was a sacred act as well as part of their education in hygiene. The most distinguishing feature of the building is the assembly hall located at the centre. This introverted common space reflected the then conservative standing of the community. The roof of the hall is elevated and surrounded by windows allowing ample sunlight and air flow, a British colonial climate responsive feature employed in a school for the first time (Figure 3.2). This gave a British colonial bungalow appearance to the vernacular features of the building. Nevertheless, the *idadi* carried similar spatial layout as the rest of the Ottoman schools surrounding the Selimiye Mosque quarter, bearing a residential appearance.

Figure 3.2. A view of the roof from Idadi's interior.

3.3.2 Victoria: the First Turkish secondary school for girls

From the late 19th until the mid-20th century most Turkish Cypriot schools were separated by gender. Although the Ottoman *Tanzimat* modernisation reforms of 1839 brought certain rights for girls to have secondary education which were soon implemented at the capital of the Empire, it took some time for the reforms to reach distant provinces. Towards the end of the 19th century, a number of Turkish Cypriot

intellectuals and visionaries had proposed the colonial administration to establish a girls' school similar to the ones in Istanbul (Dedeçay 1985, p. 7). In 1901 the Turkish Cypriot members of the Legislative Council voted unanimously to build a girls school in commemoration of the recent death of Queen Victoria (Department of Education, 1933, p. 4). This was the first Turkish Cypriot establishment of secondary education for girls and like the *Idadi*, Victoria Islam Inas Sanayi Mektebi (Victoria Moslem Girls School) was funded by wealthy citizens as well as the Evkaf. The Colonial Government contributed a little amount towards the construction of the school on the condition that it would be named Victoria (Süha, 1971, p. 243). It was decided that the headmistress was to come from Istanbul (Feridun, 2011, p. 335).

The role of *Victoria Islam Inas Sanayi Mektebi* (Victoria Moslem Girls School) in the development of Turkish Cypriot education and Kemalist nationalism cannot be underestimated. At the time of the establishment of the School, 98.3% of the Turkish Cypriot female population were not literate (Dedeçay, 2008, p.10). Suat Seyit, a headmistress brought from Turkey in 1925, was instrumental in propagating Atatürk's reforms. With the active support of the School teachers (all female) she taught and spread Kemalist principles not only to her students but also to the public (Dedeçay, 2008, pp. 22-23). She also brought to Cyprus the curriculum taught at junior high schools in Turkey. Until her arrival students and female teachers had to wear *çarşaf*, an outer garment covering a woman from head to foot and designed to hide her body from the view of men, in accordance with the Islamic tradition. Seyit herself did not wear a *çarşaf*, instead she encouraged both the teachers and students to dress in western style, in spite of criticism from some conservative families. The School has survived today under different names, reflecting the socio-political changes: Victoria Girls School (1920 - 1926, 1935- 1951, 1952 - 1953), Victoria Girls Lycée (1926 -

1935), Victoria Secondary School (1951 - 1952), Victoria Turkish Girls Lycée (1953 - 1958), Adnan Menderes Girls Lycée (1958 - 1961), Nicosia Turkish Girls Lycée (1961 - 1979), 20 Temmuz Lycée (1979 - 1990), and 20 Temmuz Science Lycée (1990 -). In the same year the Girls Lycée was given the name 20 Temmuz, it became a mixed school for the first time in its history. The choice of names can be regarded as an attempt to assign a political role in educational institutions. Soon after the British colonial regime lifted total control over the secondary schools, the Turkish Cypriot Education Board took this opportunity to drop the name Victoria and replace it with Adnan Menderes, the then prime minister of Turkey. After Menderes was deposed by a military coup in 1960, and executed in 1961, the name of the school was freed from political figures in the spirit of the newly established Republic of Cyprus. Then, in 1979, a fervent political name, 20 Temmuz, was adopted after the first day of the Turkish military intervention on 20th July 1974 resulting in the division of the island.

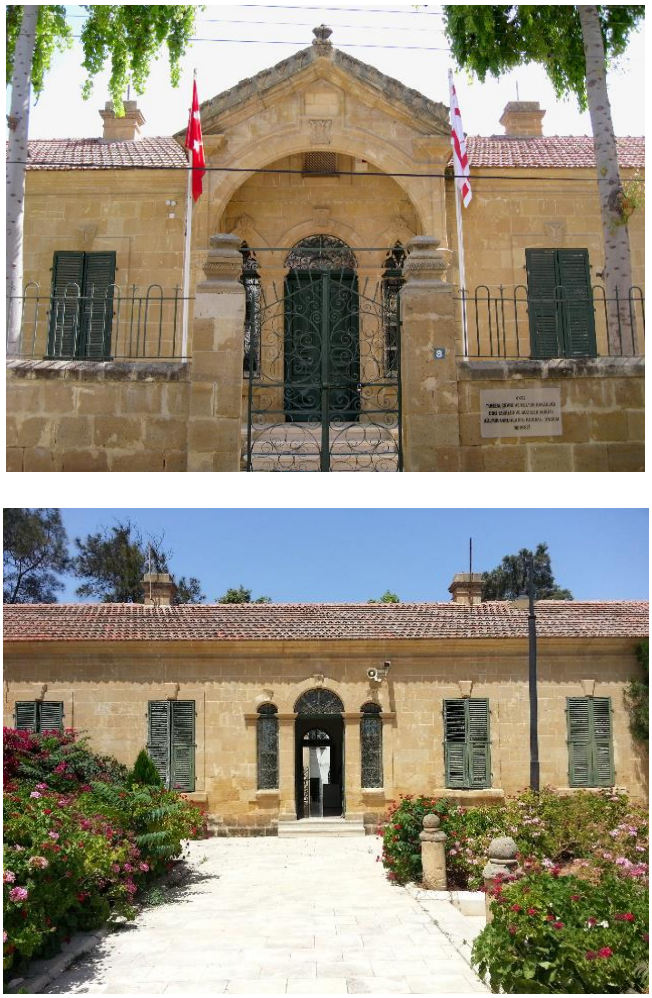


Figure 3.3. The front (top) and the back (bottom) view of Victoria Girls School.

The building of *Victoria Islam Inas Sanayi Mektebi* which was completed in 1902 has a rectangular form. The building is constructed using yellow sandstone, a local material widely used specially by the British. The highlight of the entrance is a veranda decorated with eclectic ornamentations from Gothic and Hellenic styles. This adds a monumental effect to the otherwise ordinary building. Both sides of the veranda are framed with Gothic trefoil arches with acanthus motifs on the keystones (Figure 3.3). The arched entrance of the veranda is crowned with a Hellenic pediment with floral engravings. The most distinguishing spatial feature of the building is the access of the classrooms through the courtyard which is surrounded by high walls. Once entering the entrance hall, students were able to go to the classrooms only through the

courtyard. The reason behind this setting was to seclude the girls from the outside world during the assembly.

3.3.3 Gazi: A Turkish Cypriot elementary school by a Greek Cypriot architect

Under the favourable setting helped by the British Philhellenes the Greek Cypriot school buildings became "a privileged site for experimentation with neoclassicism, which codified a nationalist imagery onto public space" (Pyla and Phokaides, 2009). During the 1920s an archetype of Greek Cypriot schools has emerged which became a visual expression of the Greek ethnic nationalism: A façade in the Greek revival style with a projection of portico and a pediment with acroteria supported by four Ionic columns (Figure 3.4). The architect behind this particular design was a Greek Cypriot, Theodoros Fotiades (1878 – 1952), who was trained in classical architecture in Athens. Greek Cypriot schools built during that decade were reproductions of this style, a straightforward historical quotation for representing the Greek national character (Given, 1997).

Figure 3.4. Front view of Pancyprian Gymnasium, one of the first schools designed by Theodoros Fotiades.

It is ironic that one of the best representatives of archetypal Greek revival schools of the 1920s is a Turkish school. In the absence of Turkish Cypriot architects, the Famagusta Boys Elementary School (now known as Gazi Elementary) was designed by Fotiades and built by the PWD. The building was completed in 1926, Evkaf providing the land and the stones within the land (Fig. 3.5). The building is located next to the ruins of St. Francis Church, within the Venetian walls of Famagusta, where almost all the Turkish population of the city lived.

Figure 3.5. Front and back view of Gazi Elementary School.

There is no recorded reaction from the Turkish Cypriot community against the Greek revival style of the School.[10] This reveals the absence of a Turkish Cypriot ethnic nationalism at the time. Moreover, unlike the Greek Cypriots, an awareness to associate a particular architectural style with an ethnic background was not yet developed amongst the Turkish Cypriot community. Apparently the Turkish Cypriots

[10] Also it is worth noting that both the delegates of the *Evkaf* and the members of the Famagusta Town School Committee for Moslem School have approved the architectural plans of Fotiades. See Evkaf Archives, 1925/166/3837.

did not see the building as 'Greek'[11]. Unlike most Greek Cypriot schools built in this style where there is a school emblem, selected from the national Hellenic heritage engraved on the pediments, there is no such application in Famagusta Boys Elementary School. As the archetypal design meant for Greek Christian schools, certain additions such as special fountains for Friday prayer ablusions, were added in due course to meet the needs of Moslem students. The headmaster's office is situated right in the middle of the U-shaped building, facing the backyard. Such a positioning of the headmaster's office was undoubtedly intended to serve a visible control mechanism. The hexagonal shaped office with windows all around, allows a disciplinary gaze from different angles while the students are in the backyard, as well as in the corridors. Such an exercise of discipline by means of internalised gaze recalls Foucault's panopticism. The traditionally high level of authority bestowed on the headmaster was fortified by this spatial configuration. Teachers entered into the building from the front door which has direct access to the teachers' common room. The students, on the other hand have to access the classrooms from the backyard. The classrooms are located along a U-shape and the circulation is provided by a semi open-veranda. Just to add a British touch, wooden crossed balustrades were used to frame the veranda, projecting an odd contrast towards the Hellenic appearance of the building.

[11] In fact, the School was considered a glorious place by some Turkish Cypriots. Hüsnü Feridun, a former Turkish Cypriot Director of Education, and a former student of Famagusta Boys School recalls saying to his father "this is how a school should look like" while climbing the stairs of the building with admiration (Feridun 2011 p.7)

3.3.4 Turkish Boys' Lycée: First Turkish Cypriot High School

A new building for the successor of the Idadi school, the Turkish Boys Lycée, was designed by British architect Allan McLaughlan and built by PWD in 1928 (Given, 1997), in response to the growing number of students. The school is located in close proximity of other schools[12] and the Selimiye Mosque (Ayia Sophia Cathedral) (Figure 3.6).

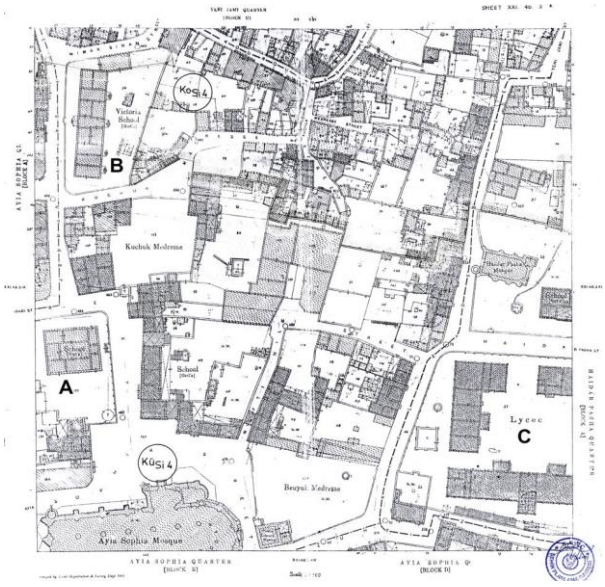


Figure 3.6. The schools district of Nicosia in 1927. A: The *Idadi*, B: Victoria Girls School, C: Turkish Boys Lycée. (Source: Cyprus Land Registration and Survey Department, Sheet No. XXI/46.3.X)

The *Evkaf* agreed to pay £6,000 borrowed from the Government towards the cost of the building (Feridun, 2011, p. 336). It was designed as a boarding school, the first Turkish Cypriot school built as such, serving students not only in the capital but also

[12] The Idadi, Victoria Girls' School, Shakespeare Private School, Haydarpaşa School, among others.

from the rest of the island. The boarding facility of the school provided a continuation of disciplinary education beyond the teaching hours.

The secular curriculum (and the textbooks) duplicated the one followed in Turkey (*Kıprıs Erkek Lisesi Mecmuası* 1934, p. 17), which was instrumental in transmitting the western aspirations of the new Republic to Turkish Cypriots. Following the alphabet reform in Atatürk's Turkey, the school has adopted the Latin alphabet at the beginning of the academic year in 1929, less than a year after it was adopted in Turkey. Those students who wished to become school teachers would stay one further year after graduation for pedagogical formation. The emerging modernist aspirations of education among the Turkish Cypriot community were further boosted by the arrival of selected teachers from Turkey who embraced Atatürk's vision. The building on the other hand, resembles other British colonial public buildings of the time. As a matter of fact, after half a century of British occupation, the Lycée was the first

Figure 3.7. View of each block of Turkish Boys Lycée from the courtyard.

Turkish Cypriot school that was built in the British colonial style (Özgüven 2004, p. 47). The building consists of two rectangular and one L-shaped two-storey blocks constructed of yellow sandstone. The arrangement of the blocks form a courtyard, a new feature in school building design amongst Turkish Cypriot schools. For the first time a Turkish Cypriot school had all the facilities required for modern education of its time, a library, an auditorium for stage arts, science laboratories, arts and crafts rooms, and a handicrafts workshop (*Kıprıs Erkek Lisesi Mecmuası* 1934, pp. 38-68). In particular, the auditorium had a worthy role in bridging the school with the public by occasional student activities. In later years the auditorium hosted a number of student plays, exhilarating the Turkish Cypriot national spirit. The boarding was not only providing accommodation but it was also acting as a ground for further discipline. The facilities brought with the school generated different social dimensions. Gradually schools become a social tool between students and the rest of the society. As the only Turkish Cypriot Lycée on the island it was a prestigious school and only those students who successfully pass a highly competitive entrance examination were admitted. The prestige of the school was enhanced by the relatively large size and formal appearance of the building. It has such a formal character that today it is used as a ministerial office building which required minimal alterations for its current function. Just like the Victoria Girls' School, the name of the Turkish Boys' Lycée has undergone several name changes under political influences. When the British colonial regime took the full control of schools in mid-1930s, the word "Turkish" in the school's name was replaced by "Islam", in the anticipation of suppressing the growing nationalistic aspirations. Two decades later, after the establishment of the Turkish Cypriot Education Board, the name of the school was changed to Celal Bayar Lycée after the then president of Turkey, Celal Bayar. Following the deposition of Bayar in 1960 after

a military coup, the name was changed to Nicosia Turkish Lycée in 1960 (along for the same reasons mentioned for the Victoria Girls' School), remaining unchanged since then.

Chapter 4

BRITISH POLITICAL REFLECTIONS AND THE EFFECT ON EDUCATION AND SCHOOL BUILDINGS (1931 - 1950)

4.1 The 1931 Revolt and its Political Effects

The Greek Cypriot ethnic nationalism had its roots in *Enosis*, Greek Cypriots' long standing aspiration for union with Greece. The *enosis* movement was encouraged by the 1896 Greco-Turkish War, and again in 1914 on the declaration of war between Britain and Turkey in 1914. The Greek Cypriot hopes for Enosis were heightened in 1915 when Britain has offered Cyprus to Greece 'in return for the latter's entry into war on the Allied side' (Holland 1998, pp. 7-8). The role of schools in the growth of *enosis* movement cannot be underestimated. Philippou (2009) states that 'during the British period, the whole of the curriculum was actually aligned with the national ideal of *enosis*, which was underpinned by the construction of a national (Greek) identity for pupils'.

Having the support of the British Philhellenic Governors, the Greek Cypriot schools nurtured Hellenic nationalism. The Turkish Cypriots on the other hand were not much concerned with nationalism until 1923 when the Republic of Turkey emerged from the ruins of the Ottoman Empire. Kemal Atatürk, the founding president and undisputed hero of the Republic, whose core values were secularism and westernisation, successfully led Turkey through a series of social and cultural reforms. 'With its predilection for social engineering and top-to-bottom modernization and its self-

declared revolutionary premises', Bozdoğan remarks, 'the Kemalist regime embraced the high modernist faith as one of its founding ideologies' (Bozdoğan 2001, p. 6). The aspirations of Atatürk found immediate recognition amongst the Turkish Cypriot community. Reforms such as the adoption of the Latin alphabet and western style dress which were introduced in Turkey by law, were adopted enthusiastically by the Turkish Cypriots who identified themselves with the Kemalist state. 'The secularising force of Kemalism was zealously embraced by "modern" Turkish Cypriot elites and the community at large, to such an extent that in instances even customary associations with religion became suspect'(Nevzat and Hatay, 2009). An important factor cultivating the Turkish Cypriot nationalism was the Greek Cypriots' escalating demands for *enosis* (Photiou 2005, p. 46).

4.1.1 The 1931 Revolt

A turning point in the colonial history of Cyprus is the 1931 revolt, which was the result of the culmination of the Greek Cypriot demands for *Enosis* (union with Greece). On 22 October 1931 some 5,000 Greek Cypriots marched in Nicosia. The crowd threw stones at the Government House, eventually setting it on fire. Within a few hours, the house, which was largely made of wood, turned into ashes. As Asmussen (2006) rightly assesses, the scale of the event was not extraordinary, but the outcome was. According to Holland (1998, pp. 4-5), it was the 'most humiliating blow sustained by the British in any of their Crown Colonies in the years between the two world wars'. In the words of Schaar et al. (1995, p.64) 'In the burning of the Government House, the visible symbol of the authority of His Majesty's Representative in Cyprus had been destroyed'. Soon after, the philhellenic governor, Sir Ronald Storrs left the Island in disappointment. In 1933 Sir Richmond Palmer became the governor of Cyprus. His period (1933-1939) was the most authoritarian

period of the colonial rule. The Legislative Council was suspended, censorship was implemented on the press, and political organisations were banned. Years later, some rights were gradually restored, nonetheless, even on the eve of independence 'Cypriots enjoyed fewer democratic rights than other colonial subjects. This was a direct legacy of the events of 21 October 1931' (Morgan, 2010, p. 39).

4.1.2 British Infliction of New Cypriot Identity

The tough measures taken by the British against the Enosis movement were welcomed by the Turkish Cypriots who felt more protected than ever. However, the Turkish Cypriots lamented that they, who were not involved in the 1931 disturbances, were penalised equally as the Greek Cypriots. The British, in a radically changed policy, tried to counteract the demands of the Greek Cypriots by promoting a different local history. They proposed a local, authentic Cypriot identity which was supposedly present since antiquity and was neither Greek nor Turkish. The new ideology of the colonial regime received support from Einar Gjerstad, the director of the Swedish Cyprus Expedition[13] then. In a very convincing manner Gjerstad invented a new ethnic group and called it 'Eteocypriot'. Eteocypriots were supposed to be the original inhabitants of Cyprus, who survived into the Iron Age in the city of Amathus (Given, 1998). Petit (1999) argued further that the language used by Amathusians was clearly non-Greek and non-Phoenician, but its attribution as Eteocypriot is ideological. Given (1998) very appropriately coined the name 'Cyprus mélange' for the new British ideology: a mixture of races, uniquely Cypriot, neither European nor Eastern. This new policy, however, did not work; on the contrary challenging the Greek and Turkish

[13] Led by the archaeologist Einar Gjerstad (1897-1988) the Swedish Cyprus Expedition conducted extensive excavations in Cyprus during the years 1927-1931 with the intention of studying the prehistory and the early history of Cyprus. Their findings were published in Gjerstad et al. (1934-37).

nationalism had a reversed effect. It provoked stronger nationalist sentiments and worsened the situation even further (Nevzat, 2006, p. 189).

4.2 Changes in Educational Policies

After the 1931 revolt, the British intrusion in educational institutions was escalated and directed towards promoting Cypriotisation of both Greek and Turkish communities. The colonial regime brought severe inhibitions to the existing liberties in education by introducing the 1933 Primary Education Law, and the 1935 Secondary Education Law. The 1933 law instituted the Governor as the central authority (Sleight, 1935, p. 3). With these new Laws, the British now had full control of the schools. As far as the Turkish Cypriot community is concerned, the choice of the curriculum was taken from the hands of Turkish Cypriot Education Commission (*Maarif Encümeni*) and given to the colonial government. Members of the central and district Turkish Cypriot Education Commissions were now to be appointed by the government and the Commission would function at a merely consultative capacity. Of the existing 22 *rüştiye*s 21 were closed, leaving only the one attached to the Idadi in Nicosia, and limiting the total entry to 80 students per year. The inspection of education taxes came under the control of the government. Land taxes payed by Turkish Cypriots were increased in order to contribute to educational expenses. School books imported from Greece and Turkey were banned, and a policy of 'education without books' was implemented. The only books allowed were the alphabet and reading books prepared locally. In 1936, English as a supplementary language was introduced into the primary school curriculum. Other measures included the prohibition of the celebration of Greek and Turkish national days, hoisting national flags, display of pictures of national heroes, singing national anthems and patriotic songs. In order to suppress Greek and Turkish nationalism, religious classifications were emphasised. Greek Cypriot schools

were then referred to as Greek-Christian or Orthodox-Christian Schools, while the Turkish Cypriot Schools were referred to as Moslem Schools[14]. Thus the name of Turkish Lycée in Nicosia was changed into Islam Lycee. The school uniform which was identical to those in Turkey was changed to include green jacket and hat (Feridun 2015, p. 20), the symbolic colour of Islam. For the first time, English headmasters were appointed to both Islamic Boys Lycée, and the Victoria Girls Lycée, despite strong objections raised by the Turkish Cypriot community.

During the two decades from 1930 to 1950, there was a marked decrease in the number of Turkish Cypriot schools which cannot be attributed to the Second World War alone. In fact, the sharpest decline occurred through the years 1932 - 1937: In 1932 there were 296 schools against 283 in 1933, 264 in 1934, 263 in 1935, 238 in 1936 and 211 in 1937. There was also a corresponding decline in student numbers (Feridun, 2011, p. 473). Table 4.1 shows these changes in three-year periods.

[14] See for example, the 1935 Secondary Education Law, The Statute Laws of Cyprus, No. 25/1935 (Nicosia: The Government Printing Office, 1936), p. 62.

Table 4.1. Turkish Cypriot Primary Schools and student numbers between the years 1931 and 1950 (Source: Feridun, 2011, pp. 473-475).

Year	Number of schools	Number of students		
		Girls	Boys	Total
1931-32	294	4044	5923	9967
1933-34	283	4445	6456	10901
1935-36	263	3174	4788	7962
1937-38	211	2931	4493	7424
1939-40	n/a	n/a	n/a	n/a
1941-42	n/a	n/a	n/a	n/a[15]
1943-44	203	4443	5528	9971
1945-46	206	4826	5968	10794
1947-48	208	5223	6255	11482
1949-50	206	5019	5932	10951

4.3 School Buildings from the mid-British Colonial Period

4.3.1 New British Attitude on Public Buildings Design

Almost all public buildings from 1930s through 1950s exhibit the mélange ideology. George Jeffery who once supplemented the Cyprus Archeological Museum with a porch in the image of Athena Nike Temple was now leading the PWD as the architect with the conviction of the new colonial policy. During this period we also witness the promotion of Camille Enlart's (1987) well known book on Gothic art in Cyprus,

[15] The missing figures in Feridun's (2011) comprehensive work are found in the colonial reports Kyrenia National Archives. In the report of the Department of Education for the period 1942 - 1945, the Director of Education Sleight (1947, pp.10-11) provides these figures: 1938-39 schools 205, girls 3541, boys 4696, total 8237; 1941-42 schools 203, girls 4274, boys 5443, total 9717.

especially by the Governor, Sir Ronald Storrs. Enlart's description of the great monuments in the Island as European (i.e. not local) considered providing a justification for the colonial regime to guard this European heritage (Given, 1998). Jeffrey too held the opinion that mélange was a manifestation of an inferior Cypriot culture, as compared to cathedrals of St. Nicholas (Lala Mustafa Paşa mosque) and Ayia Sofia (Selimiye mosque) which are manifestations of 'pure' European culture (Given, 1997).

One of the best examples representing the mélange ideology is the new Government House. After the Government House was burnt to ashes in the 1931 revolt, a new one had to be built. The Governor Storrs took this opportunity to recover the lost prestige of the colonial power and to project his new image of Cyprus. He wanted the new Government House to represent 'a deeply historical Cyprus, but one without any trace of Hellenic nationalism' (Given, 2005). He brought Austen Harrison, Chief Architect for the PWD of Palestine, to design the new building. A description of Harrison's design is given in Schaar et al. (1995, p. 76). Storr, however, left Cyprus in 1932 without seeing his vision realized. His impatient successor Sir Reginal Stubbs, complained about the delay and the expense of the project. He replaced
Harrison with the London based architect Maurice Webb. Webb took over the project in 1933. His Π-shaped design reflected the colonial regionalism and mélange ideology required of him.

Figure 4.1. Two examples of public buildings in mélange style: The Government House in Nicosia on the left, and the Police Headquarters in Larnaca on the right.

The new Government House was completed in 1937, using sandstone as the main building material (Figure 4.1). The building exhibits a non-harmonious mixture of past 'authentic Cypriot' architectural styles, except the Greek: Frankish Gothic style pointed arches, modernist balustrades, round arched openings at the ends of façades, and Ottoman domes. The arches in the rear arcade are pointed but those of the verandas just above them are round. The front façade is interrupted by an unevenly large porch. On the porch an enormous British coat of arms was carved. According to Given (2005), this massive coat of arms were sculpted 'just in case the British component in the Cypriot style is missed'. It is, however, more likely that the huge coat of arms was intended to convey a stronger message of British colonial power and presence.

4.3.2 First Teachers' Training College

The outcome of British efforts to have the entire control over the Turkish and Greek Cypriot education yielded to the establishment of the first Teacher Training College at Morphou. Following the closure of the existing separate Turkish and Greek teacher training institutions, the College was opened in 1937 to cater for 48 Turkish and Greek Cypriot boarding male teacher candidates (Weir, 1952, p. 41). The training was two years long, followed by a third year course on agriculture for selected students, normally one fifth of the graduating class. The medium of instruction was English

(Sleight, 1947, p. 19). Although the Greek and Turkish schools were separate [16], the motivation behind a common teacher training college was to inflict 'Cypriotness' among the teacher candidates from the two communities under the umbrella of the British culture (Feridun, 2011, p.46).

While the Turkish Cypriots were quite happy of having a new opportunity for education and did not see the establishment of Morphou Teachers' Training College as 'deturkification' of the Turkish Cypriot youth, the Greek Cypriot leadership saw it as an attempt of 'dehellenisation' of the Greek youth, and a threat to the Greek nationalism (Bryant, 2004, pp. 164, 174). The establishment of the College, as well as its place next to the Morphou Agricultural Experimentation Station, was recommended by Sir Ralph Oakden who was sent to Cyprus in 1934 to prepare an economic report for Cyprus (Demetriades, 1985, p. 167).

[16] Anotable exception was the presigious English School in Nicosia, established in 1900.

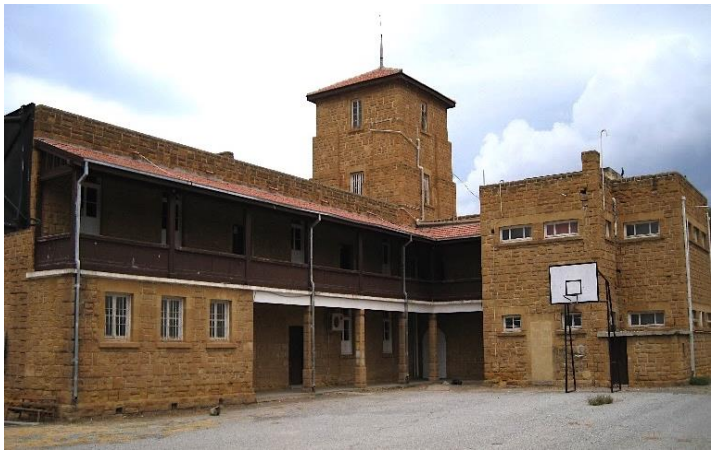


Figure 4.2. Front and back view of Teachers Training College

Oakden further recommended the inclusion of some agricultural knowledge in the curriculum, basing his argument on the fact that most elementary school teachers in villages came from towns had little or no knowledge of agriculture. Following Oakden's advice, the College was built on a large site suitable for agriculture. As Given (1997) rightly argues, the most direct mechanism for representing a national character is by a historical quotation, such as arches, pediments, and domes. After the 1931 revolt the British colonial regime used exactly this mechanism to fight against the Greek and Turkish ethnic nationalism. In all public buildings they adopted their new *mélange* policy by referring to the vernacular past of Cypriot architecture but with an overstated omission of anything Hellenic. The College building was designed by

the PWD architect William Caruana, and clearly reflects the new British *mélange* policy (Fig. 4.2). It is an arresting building with a 'rather alien character for Cyprus' (Georghiou, 2013, p. 176). The blunt appearance is enhanced by sandstone cladding in an uncommon pattern and colour. The two storey linear building is symmetrical about a central tower. Right at the entrance, the master's office and master's common room are positioned on the left and right wings respectively. The facilities such as library, dining and common rooms are situated on both wings of the ground floor. The upper floor was used entirely as the dormitory. The towering central block contains an infirmary on the second floor and the master's bedroom on the third floor. The master's bedroom have windows all around providing not only ventilation but also an observational control. The classrooms (Figure 4.3) are detached from the main building, symmetrically situated on both sides. In order to cut down the cost, ornamentations of any kind were avoided. In visual terms the building is prison-like and daunting. Furthermore, the agriculture courses and gardening activities which were included in the curriculum, which meant to distract students from the 'nationalist path', did not respond to colonial regime's intentions (Given, 1997).

Figure 4.3 One of the two identical classroom blocks of Teachers Training College.

The World War II had some adverse effects on education in Cyprus. A number of schools, mostly in large towns, were used as camps for soldiers and military hospitals. The students of the Islamic Lycée of Nicosia, for example, were transferred to the village Lapithos in 1941. Prefabricated barracks were added to these schools to support the needs of the army, some of which still remain today. These barracks nowadays functioning as storage rooms, are silent reminders of war which became a part of Turkish Cypriot school identity.

During the later stages of the World War II, in 1944, the central British educational policy alleviated dominance thus the colonial government did not oppose the opening of Turkish Cypriot secondary schools in Famagusta, Limassol, and Paphos.

Chapter 5

THE EMERGENCE OF MODERN SCHOOL ARCHITECTURE AND EARY DECADES OF THE REPUBLIC (1950-1974)

5.1 Political History of the Late British Period

The last decade of the British rule witnessed a perpetual political unrest in Cyprus. With the election of the young, passionate, and much admired Makarios as the Archbisop of Cyprus in 1950, the Enosis movement gained a new impetus. In this very influential position Makarios was not only the head of the Cypriot Orthodox Church but also he became *Etnarch*, the national leader of Greek Cypriot community. The Turkish Cypriot community, having no sympathy and increasingly agitated with Enosis formed the "Cyprus is Turkish" association, demanding "*Taksim*" (partitioning the island). In 1955 the Cyprus crisis entered into a new phase. The crisis which was confined to diplomacy turned into a military struggle between the Greek Cypriot EOKA (National Organization of Cypriot Struggle) and the British forces, eventually drawn the Turkish Cypriots into the conflict. Underestimating the scale of the problem, the British was reluctant to decolonize the island, and the military operations were intensified in 1957. However, both NATO and the United States, seeing the Cyprus crisis as a treat to the security of the Middle East, exerted diplomatic pressures on Britain, which resulted in British prime minister's call at the end of 1958 for a meeting

between Greece, Turkey, and Britain (Maier 1958, p. 159). The negotiations were concluded in 1959 in Zürich.

The Zürich and London treaties of 11 and 19 February 1959 between Greece, Turkey and United Kingdom provided a bi-communal constitutional framework for Cyprus granting her full autonomy. On 16 August 1960, the agreement came to existence and Cyprus was proclaimed as an independent state. As Maier (1968, p. 160) rightly assesses, "the foundation of the independent Republic of Cyprus was the result of a compromise between highly contrasting interests, involving substantial concessions" from both Greek and Turkish Cypriot communities, the legacy of the past was soon to overshadow the new Republic. Although the struggle for independence was now over, the treaties was unable to bring immediate peace. There was considerable dissatisfaction amongst the Greek Cypriots who saw the constitution raising the Turkish Cypriot minority to political equality. The partnership lasted just over three years and on December 1963, intercommunal fights began between the two communities. During the early years of violence (1964-1967), thousands of Turkish Cypriots became refugees by fleeing from villages to safer towns under Turkish Cypriot control.

5.2 Education Policies of the Period

By the end of the Second World War the percentage of illiterate population of 15 years old and over was dropped to 39.5% in 1946 from 53.7% in 1931. In the 1946 census the illiteracy in the six largest towns was 27.1%, half of the illiteracy level at the villages (43.3%). This is a considerable improvement from the illiteracy levels of 74.5% in 1911 and 64.9% in 1921 (UNESCO 1957, p. 141). Primary school enrolment

(per 100 children 5-14 years old) around 1950 was 63, comparing favourably with 43 in Portugal, 59 in Spain, 61 in Japan, and 69 in Belgium (UNESCO 1957, p. 166).

After the War, the British colonial regime gradually withdrew its control over the educational matters, allowing the re-establishment of independent Greek and Turkish Education Boards. The Moslem Lycée and Victoria Moslem Girls School were renamed as Cyprus Turkish Lycée and Victoria Turkish Girls Lycée respectively, and their English headmasters were replaced by Turkish ones. Henceforth, the British did not object to the reopening of a number of rural junior secondary schools. With the 1952 Public Aided Secondary Schools Law, funds for schools were increased and teachers' salaries improved. However the new Law obliged the schools to be directed by the colonial Education Board. The Federation of Turkish Cypriot Associations objected to this Law, asking financial support from Turkey. The support came but rather late. By that time all but Famagusta district schools had accepted the British proposal. The Turkish Cypriot schools of Famagusta district[17] which patiently resisted, gained their autonomy.

During the 1950s the elementary education in Cyprus was not yet compulsory. Nevertheless, an overwhelming proportion of children attended school. A British colonial report of 1954 estimated that more than 90% of the 6-13 age group were attending school (Sleight 1953, p. 8), a clear indication of the high importance attached by Cypriots on education. Turkish Cypriots, in their yearning for independence and

[17] Famagusta Junior High School, and the village junior high schools of Galatya (Mehmetçik) and Konetra (Gönendere).

the aspiration of becoming part of the modern world, eagerly strived towards the decolonisation of the island.

The 1958-59 school year was the last one under the British rule. Table 5.1 below summarizes the state of education in May 1959.

Table 5.1. Statics of Turkish Cypriot Education in May 1959 (Source: adopted from Feridun, 2011, p. 142).

School type	**Number of schools**	**Number of teachers**	**Number of Students**
Junior high school and Lycée	13	388 (F: 102; M: 286)	4,610 (F: 1,641; M: 2,969)
Primary school	209	463 (F: 163; M: 300)	15,355 (F: 7,402; M: 7,953)

In the last decade of the British rule, certain restrictions in the education system were gradually relaxed. Textbooks from Turkey have been re-introduced in 1957. The display of Kemal Atatürk's portrait in classrooms was allowed by the Colonial Government from 1956 onwards[18] (Behçet 1968, p. 323).

The Zürich Agreement provided for each community to have its own Communal Chamber with the responsibility for education, religion, and culture. Each Communal Chamber had the right to impose and collect taxes for the needs of bodies and institutions (e.g. schools) under their control. Just three months before the British transferred the full authority on educational matters to the Turkish Communal

[18] Interview with Assoc. Prof. Dr. Erbil Akbil, a former Minister of Education, Turkish Republic of Northern Cyprus.

Chamber a report has been prepared by Hüsnü Feridun, head of the Education Board of the Turkish Chamber (Feridun 2011, p. 143). Unlike the Colonial Government's last few Annual Reports on Education (Lightbody 1958, 1959), Feridun's report is full of existing problems (poor state of school buildings, shortage of teachers, need for curricular revision, etc.). The minutes of the first meeting of the Education Board of the Turkish Communal Chamber, dated 9 June 1959, proudly confirms the continued alliance with the Turkish Ministry of Education. Raising Turkish flag regularly on Saturday afternoons and on Monday mornings is among the decisions taken on that meeting (Feridun 2011, p. 155). Even after the establishment of the Republic, the Board of Education continued to have Turkish nationalism as its core mission and the teachers were instructed to propagate and nourish nationalistic sentiments. In the 30 December 1960 issue of the *Bulletin of the Education Board*, the headmasters of elementary schools were instructed to

- teach the Turkish national anthem, heroic poems and legends,
- recite "Turkish Children's Oath" every morning before lessons start, and
- raise Turkish flag on Saturdays after the last lesson and on Mondays before the first lesson.

The first Five Years Educational Development Plan 1962-1967 prepared by the Cyprus Turkish Communal Chamber (Feridun 2011, pp. 437-446) is again a testimony of loyalty to Turkey. Care is taken to make the syllabi equivalent to those followed at schools in Turkey. A pronounced feature of the Plan was to promote the technical vocational, commercial, and agricultural schools. The length of studies at the Teachers

Training College was increased from two to three years. All textbooks were imported from Turkey.[19]

The 1964 intercommunal fights had adverse effects on Turkish Cypriot education. Many villages with a small Turkish Cypriot population were evacuated, causing an unbearable burden on schools at larger towns. The number of elementary schools were dropped from 230 in the school year 1962-63 to 151 in 1964-65 (Table 5.2 below). All male teachers were called for defence duty, resulting a drastic shortage of school teachers. During 1964-66 some schools served the Lycée students in the mornings, and junior high school students in the afternoons. Under those circumstances the Development Plan was not implemented and soon it was abandoned. Not until 1968 a new Education Plan (Behçet 1969, p. 324) was developed .

[19] The only exceptions were the books on arithmetic taught at the elementary schools and the English language books.

Table 5.2 Turkish Cypriot Primary Schools and student numbers between the years 1950 and 1974 (Source: adopted from Feridun, 2011, pp. 474-476).

Year	**No. of primary schools**	**Number of students**			**No. of secondary schools**	**Number of students**		
		Girls	Boys	Total		Girls	Boys	Total
1950-51	204	5304	6101	11405	n/a	n/a	n/a	n/a
1952-53	207	5782	6428	12210	n/a	n/a	n/a	n/a
1954-55[20]	214	6813	7409	14222	12	707	2363	3070
1956-57	224	7333	7790	15123	n/a	n/a	n/a	n/a
1958-59	219	7402	7953	15355	17	1504	2678	4182
1960-61	229	7666	8100	15766	20	2495	4040	6535
1962-63	230	7797	8501	16298	20	2818	4320	7138
1964-65	151	n/a	n/a	16980	20	2318	3648	5366
1966-67	154	8651	9163	17814	20	2645	3794	6439
1968-69	159	8478	8948	17426	24	3073	4345	7418
1970-71	163	8374	8825	17199	25	3301	4410	7711
1972-73	171	7766	8248	16014	25	3519	4437	7956

5.3 School Buildings from the Late-British Colonial Period – Early Republic

Impatient to be part of the modern world, Cypriots eagerly contributed to the decolonisation of the island. Atatürk's reforms were enthusiastically adopted and

[20] From: Department of Education, Cyprus. Statistical Tables for the School Year 1954-1955.

applied by the Turkish Cypriots with no time, nevertheless, Turkey's new architectural culture arrived in Cyprus only decades later. In Turkey 'modern architecture was imported as both a visible symbol and an effective instrument of this radical program to create a thoroughly Westernized, modern, and secular new nation dissociated from the country's own Ottoman and Islamic past' (Bozdoğan 2001, p. 6). In this regard, Bozdoğan assesses, 'the architecture in early republican Turkey can be looked at as a literally concrete manifestation of the high modernist vision'. In Cyprus, the introduction of modern architecture was delayed by political disorder and the lack of architectural education on the island (Feroes and Phokaides, 2006). With the arrival of the young, Turkish and European-trained Cypriot architects, a discrete architectural style emerged during the early 1950s and buildings (both public and private) in modern style appeared one after the other.[21] The main feature of the modern period was the introduction of the concrete frame which facilitated freedom and complexity in architectural designs.

As Gurdalli and Koldas (2015) rightly observes, modern architecture in Cyprus during 1950s was perceived as an instrument for symbolising decolonization, and not just an architectural style.[22] According to Kurt (2011), Cyprus did not undergo the course of modernization parallel to the West, neither in terms of pace nor in the dimension of

[21] However, it must be stressed that the modern movement started in Cyprus before the Republic was established. There are few examples of modern public buildings which avoided the British colonial style. A good example is the old Nicosia General Hospital. The Hospital, completed in 1939, is one of the first examples of Bauhaus architecture in Cyprus.

[22] In an interview conducted by the author of this thesis dated 17/10/2016, Hakkı Atun, an architect of the Republic period, echoed this perception.

the process. Consequently considering the conditions of the time, certain mediums of modernization were surpassed since it was not possible to cope with speed of other industrialized countries social, economic and cultural advancements. Furthermore, Kurt (2011) argues that Cyprus did not witness repetitive architectural identities modernity had created which explains why the local values are never lost. School buildings during the peak of modern architectural era of Cyprus demonstrate highly inventive designs and one of its kind examples.

There is a marked difference between the Greek and Turkish Cypriot school buildings during this period which stems from the different nationalistic roots of the two ethnic communities. The Greek Cypriots continued to build most of their schools in the Greek revival style. The Turkish Cypriots on the other hand, closely following Atatürk's reforms of modernisation. The school building designs that followed the modernist movements is a direct consequence of this ideology (Seretis 2003).[23]

5.3.1 Atatürk Elementary School: First Modern Turkish Cypriot School Building

Atatürk Elementary School in Nicosia is one of the first examples of public schools built in the modern style. Completed in 1957, it was the first Turkish Cypriot school built in concrete and without a colonial architectural vocabulary. Impressively rising on *pilotis* in the midsection of the building and bearing the name of the Turkish national hero, this two-storey, larger than ever Turkish Cypriot school instantly instigated Turkish nationalist sentiments.[24] For a community struggling for liberation,

[23] A similar stylistic pluralism is observed in Serbia where state and public buildings were designed in eclectic style while the churches and schools were designed in Byzantine style because they 'belonged to the spiritual realm.' See Pantelić (1997).

[24] It is worth noting that in 1950s Britain modern architecture is seen as "an economic mode of building that visually represented a forward-looking nation". S. Sadler (2004, p. 39).

the building represented an incarnation of Atatürk's secular ideology, a visa to modernism, and a matter of national pride.[25] Such an attribution is comparable to Bilgi's (2014) reflection of schools functioning as "monuments and statues" in the early decades of the Turkish Republic. Although it was a mixed gender school, girls and boys were in separate classrooms occupying the East and West wings of the building respectively. A distinctive aspect is the way of access to the building. Since the building stands on pilotis there is no direct access to the main functions. The main functions of the building are located on the first and the second floor and only the services such as canteen and WCs are situated on the ground level. The foremost features of the building are the projection of the vertical circulation cores; continuous, flat, and horizontal shading elements; and circular windows which were the fashion of the day (Figure 5.1). The classrooms face south while the administrative units and shared facilities such as the library and the workshop areas face the north, separated by a wide corridor providing the horizontal circulation. The semi-glassed wall of the administrative office provides a visual connection with the corridor, facilitating an extended control of the corridor (Figure 5.2). The circulation core on the right wing of the building leads to the basement where there is a theatre hall for performing arts. The school incorporates a kitchen for home economy lectures, science lab, workshop ateliers and a library. These functions were introduced to a primary level of education for the first time. The building has an unusually introvert and formal character, giving an impression that it was initially designed as a high school rather than a primary. The

[25] Interviews with former students of Atatürk Elementary School from the 1950s, and Turkish Cypriot architects Hakkı Atun and Ayer Kaşif.

architect of the building is not known. However, according to the oral history architectural drawings came from Turkey.

The school resembles the designs of Ernst Egli and Bruno Taut[26], in particular the Ismet Paşa Girls' Institute (Figure 5.3) designed by Egli and built between 1930 -1934 in Ankara. The projects of Egli carried the basic characteristics of German modernism, adapted for the Turkish capital: flat roofs used partly as terraces, plain surfaces, borders around windows or continuous window sills, and the use of colonnades for entrances (Bozdoğan 2001, p. 72).

[26]Chief architects of the Turkish Republic's public buildings during the 1930s. After 1933, Atatürk invited more than two hundred German, Austrian and Swiss professors most of whom were opponents of the National Socialist regime. These scholars played key roles in establishing major departments at Turkish universities. Including in this figure were forty architects, among them Ernst Egli, Clemenz Holzmeister, Martin Wangler, Bruno Taut, Martin Elsaesser, Franz Hillinger, Wilhelm Lihotzky, and Margarette Schütte-Lihotzky. In the same decade, architecture in Turkey became "a major aspect of the larger republican revolutionary discourse and its claim of a radical break with the Ottoman past" (Bozdoğan, 2001, pp. 447-48, 70-71).

Figure 5.1. A view of Atatürk Elementary School with recent cladding.

Figure 5.2. Views from the corridors. On the left the administrative office, on the right classrooms and workshop areas.

The role of émigré scholars in manufacturing modernism in Turkey cannot be underestimated. Turkish modernism, as Ergin (2009) argues, relied on western social sciences and humanities not only on abstract terms but also in the form of encounters with western refugee scholars and artists. The "New Architecture" in Turkey emerged as an expression of the modernist ideals of the Republic. Turkish Cypriots, who in the 1950s became rather intolerant towards any retrospective image of the colonial rule,

rejected the colonial forms, just like the Kemalists in Turkey rejected the Ottoman forms two decades earlier, and desired to construct Ankara's modernist atmosphere in Cyprus.

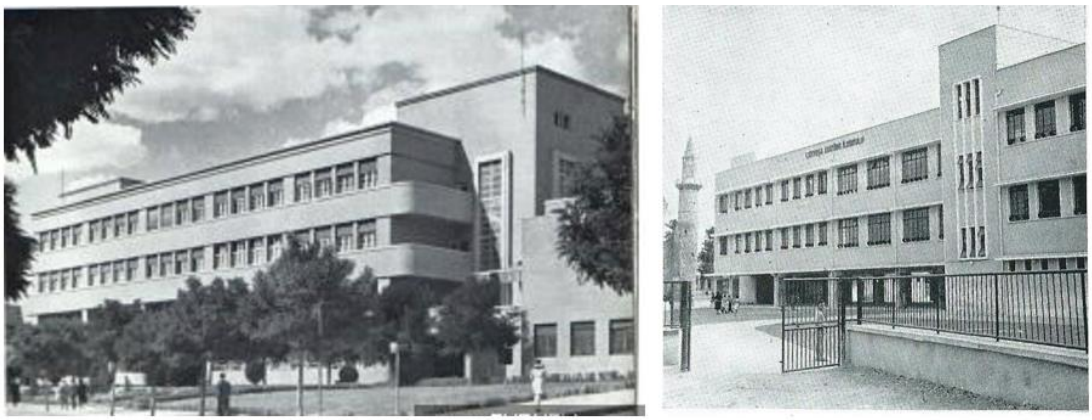


Figure 5.3. Ismet Paşa Girls' Institute on left and Atatürk Elementary school on right (unknown photographers).

5.3.2 Namık Kemal Lycée: the First Independent Turkish Cypriot Lycée

Namık Kemal Lycée (NKL) was the leading Turkish Cypriot school fighting for autonomy and thus rejecting the financial aid from the British colonial government. Established in 1944 as *Mağusa Ortaokulu* (Famagusta junior high school), it was the second oldest Turkish Cypriot Lycée outside Nicosia. The school, which gained the status of Lycée starting with the 1952-53 school year, took shelter at various elementary school buildings[27] until the 1958-59 school year at which its current building was completed.

[27] Famagusta Boys' School (1944-45), Pertevpaşa Elementary School (1945-50), Kutup Osman Complex (1950-58).

NKL was among the first schools to initiate a struggle against the Colonial regime with a motto "independent national education" (Atun, 1994, p. 2). The name of the school was voted by the students to be the Turkish patriotic national poet Namık Kemal[28], already a symbol of Famagusta and fighter for freedom. The name Namık Kemal had a strong impact on students, propagating Namık Kemal's spirit of struggle for freedom and nationalism. NKL has also an exceptional place in the history of TMT, the Turkish Cypriot resistance organisation: The core members of the TMT's Famagusta Branch were selected amongst the teachers and students of NKL (Atun, 1994, p. 2).

The Famagusta District Turkish Secondary Schools Commission, headed by Dr. Niyazi Manyera, not able to collect sufficient funds from local citizens, sought financial help from the Turkish Government. The Turkish Government took not only the responsibility for the new building (including the design) but also provided teachers by paying their full salaries. The provision of Turkish teachers continued until local teachers (mostly graduates of NKL) were educated in Turkey and returned back to the Island at the beginning of the 1960s. These selected teachers from Turkey established a high quality of education, promoting NKL as a leading Lycée during late the 1950s and early the 1960s.

[28] Namık Kemal (1840-1888) was an Ottoman patriot, journalist, political activist, and freedom fighter. He was exiled in Famagusta from 1873 to 1876, during which he had written most of his influential books.

The foundations of the new building were laid in Evkaf land, next to the Kutup Osman Complex (Figure 5.4) in 1955. The site of the building is located on the main boulevard of Famagusta, a district which houses the central administrative buildings.

Figure 5.4. Front and back views of Kutup Osman Complex.

This new building (Figure 5.5) with its enlarged capacity of teaching and learning environments gave an opportunity to a greater number of students to pursue high school education. It is also one of the first boarding schools of Famagusta District. The Kutup Osman Complex was later converted into a dormitory providing additional accommodation for the students who travelled from neighbouring towns and villages.

Figure 5.5. Front view of Namık Kemal Lycée.

With regards to its plan layout, the new building carries a symbolic meaning. The layout resembles the shape of an aircraft from an aerial view. This shape is obtained

by situating the two wings of the building in such a way that they form a stretched "M". The NKL yearbooks from the opening years contain articles in which students perceive this layout as an emphasis of the rising nationalistic and militaristic spirit of the time, attaching to it a sign of power.

The massive three-storey building is built by reinforced concrete frame with brick infill. One of the main features of the building is the slight projection of the concrete frame, which reveals the structural system on the facade. This was a common application amongst the early period of reinforced concrete structures in the island. The student access to the building was from the left and right wings, whereas teachers' entrance was from the central, larger entrance. This perhaps reveals the hierarchical positioning of the building's inhabitants. This practice constructs a notion of centrality, emphasising the importance of almost sacred presence of teachers and headmaster in the building.

Once entered into the building, the circulation is equally distributed between teachers and students. In each floor there is a long corridor with enfilade of classrooms and other rooms of different functions. The corridors are well lit due to the abundant use of repetitive windows on the front façade. Until the 1980s the school lacked a most important space that other schools of the period had, the theatre hall. The junction of the two corridors in the second floor, together with the upper stairway was used for common activities, such as competitions of poetry reciting. For many years the right wing of the third floor was transformed to house the boarding facilities without any alterations made to the building. This was not originally intended, therefore the design did not respond well to this function. The building appears rigid with its strong geometric and symmetrical form, embodying the ideological portrayal of modernism ascribed with a latent form of nationalism.

5.3.3 Nicosia Turkish Girls Lycée: the First Turkish Cypriot School Building of the Republic

On 16 August 1960, the British colonial period came to an end and both Greek and Turkish communities were mobilised to construct the Republic of Cyprus. Although the government 'desired to distance itself from colonial traditions', the decolonisation efforts, however, prolonged for a while because of the 'vivid presence of colonialism'. 'Not only because colonial buildings often housed the new state's institutions, but also because colonial laws were still in effect and administrative practices largely followed former colonial structures' (Pyla and Phokaides, 2011). Under the new Republic, education continued to be segregated. The segregation was not limited with education. Within a few months, the Turkish Cypriot Association of Architects and Engineers was established. The first architect registered in the Association was Ahmet Vural Behaeddin (1927–1993) who is recognized as one of the founders of modern architecture in Cyprus. An admirer of Kemal Atatürk's modernisation ideology, Behaeddin studied at Istanbul Technical University during the period at which distinguished architects including Paul Bonatz were teaching. After working briefly in Munich and London, he returned to Cyprus in 1954, as the first Turkish Cypriot architect. In the early years of the Republic, Behaeddin had the opportunity to design houses for the hungry-for-modernism elite clients. His never compromising designs no doubt positively contributed to the identity of the modern Republic. Some fine examples of his work include Nicosia Girls Lycée, Atatürk Girls Vocational Institute, and Köşklüçiftlik Elementary School. When the Turkish Cypriot Education Board decided to have a new building for the Turkish Girls Lycée, a national competition was held in Ankara. Behaeddin won the first prize. Completed in 1963, the Turkish Girls Lycée was the first major Turkish Cypriot school built after the independence,

playing an important role towards the visual decolonisation of Nicosia. The building complex is just outside of the Venetian city walls of Nicosia, with the higher blocks set back of lower blocks, thus avoiding any interference with the historical texture. Its uniqueness rested on its modern presence aligning the Turkish Cypriot 'forward looking' national aspirations, while not neglecting local references. A large sized Atatürk sign placed on the highest visible point acts as the Turkish ideological representation (Figure 5.6). The building has all the modern educational facilities including a multi-purpose hall, which was designed to meet the needs of the Turkish community, such as plays, concerts, and meetings.

Figure 5.6. Front view of Turkish Girls' Lycée.

Although the British architects had also paid much attention to climatic considerations in the past, the architectural character of this school is solely based on the features of climate control. The most striking spatial feature of the school is the absence of corridors for classrooms in such a large building complex. Access to classrooms, which are on upper floors, is provided by wide staircases, serving two classrooms on each floor. Although this arrangement of access to classrooms was used earlier by Allison and Peter Smithson in their acclaimed 1954 Hunstanton School in Norfolk, Britain, it was used in a Cypriot school for the first time. The Smithson's Hunstanton

School (Figure 5.7) was an award winning project where the architects were recognised as the pioneers of brutalism in architecture in Britain with their design. Apart from similar circulation pattern, the resemblance can also be found in details such as the staircase railings, materials and the overhead concrete planes. The vertical circulation is highlighted with concrete screen blocks, a novel application for the period (Figure 5.8).

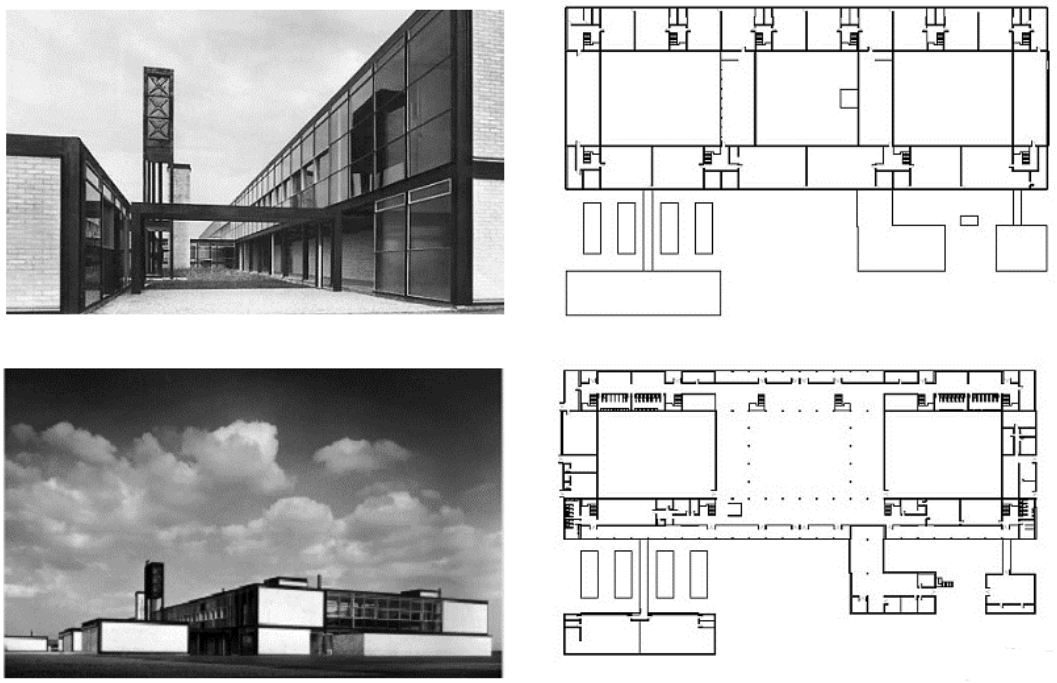


Figure 5.7. The Hunstanton School, Norfolk (Source: wikiarquitectura.com).

Figure 5.8. A classroom block, Turkish Girls Lycée

There are two entries to the building, both facing the front façade. One is for the students, which leads from entrance hall to the classroom blocks and the other is for administrative use, which leads to a double loaded corridor of teachers' common room, headmaster's office and other administrative offices. All the shared facilities such as library, laboratories and workshop areas are located on the ground floor; upper floors accommodating only the classrooms.

The layout of the building is similar to a campus plan where the complex consists of separate blocks. The concrete canopies along the circulation axis attaches the blocks to each other. This does not only provide shade but also creates an illusion of integrity of separate blocks. These blocks are arranged in such a way that it creates multiple courtyards. Compared to previous school buildings which have a single courtyard, this is rather a liberating concept. The concrete frame of the building is filled with square red bricks, which give the school its core identity. The red brick is a local material but from its dimensions to its way of use in the school is native. Although during those years the use of red brick became popular in some modern residential buildings and newly built schools, it is the first time that an entire building is made of this material. This abundant use of red brick gives an indigenous architectural insight to the building.

With all its innovative details, the Girls Lycée became a benchmark among the Turkish Cypriot schools. The school which was a large investment for a small community, shows the determination of a society progressing along the path of modernism and fulfilling the neglected education of girls.

Chapter 6

CONTEMPORARY SCHOOL BUILDINGS OF NORTH CYPRUS (1974 - 2000)

6.1 Political and Socio-Economic Changes after the Division of the Island

In 1974 Makarios won the presidential elections of the Republic of Cyprus. By that time Makarios had renounced Enosis and thus the growing tension between him and the Greek military government had reached to daring levels. On 15 July 1974 the Greek junta in cooperation with EOKA-B, the right-wing Greek Cypriot paramilitary organisation, launched a *coup d'état*, overthrowing Makarios with the objective of accomplishing Enosis. This action conduced Turkey to intervene as one of the three guarantors of the Republic.

The Turkish military intervention of 1974 has divided the island into two, both geographically and administratively. It was soon clear that the subsequent declaration of the Turkish Republic of Northern Cyprus in 1983, recognized only by Turkey, resulted in an even stronger political and economic dependence on Turkey. One of the consequences of the intervention was the arrival of a large number of immigrants from Turkey, creating a heterogenic social, cultural, economic and educational structure.

6.2 Educational Polices Since 1974

In 1975, the First National Education Council met in Nicosia to discuss possible measures to accommodate the socio-economic changes that took place after the 1974 intervention. The most important decision taken was to adjust education to fulfil the needs of the society within the context of the principles of contemporary educational policies, assuring however a strict parallelism to the education system in Turkey. The Council further recommended that in addition to formal education, informal education and vocational training should be restructured, and education at tertiary level should be introduced in order to accomplish the planned national progress. All these recommendations found place in the First Five-Year Progress Plan, 1978-1982 (Kıbrıs Türk Federe Devleti Yasaları, 1979).

After the declaration of the Turkish Republic of Northern Cyprus, the Law of National Education came into force in 1986. A strong influence of the educational system of Turkey with insisting references to Atatürk's nationalism is evident in the text of the Law (Milli Eğitim Bakanlığı, 1986). The 6-year elementary education was reduced to 5 years to establish parallelism with Turkey. In accordance with this law the compulsory education age was increased to 15. In addition to Nicosia Turkish Maarif College, the only high school where teaching is conducted in English, Maarif colleges in Famagusta, Kyrenia and Güzelyurt were established. This followed the then growing trend of "Anatolian Lycée" model in Turkey.

The number of schools and student numbers during the period of 1977 - 2004 is given in Table 6.1. One of the two most notable changes can be seen in the figures of the year 1989. With the introduction of the 5-year elementary schooling, the number of

students in elementary schools were dropped by 20.6%. In consequence, the number of students in secondary schools has risen by 71.4%. The second striking year is 1995, where over 50 village elementary schools were closed down under the new centralisation policy of the government.

Table 6.1. Number of schools and students in north Cyprus (rural and urban) between the years 1977-2004 (Source: Çağlar and Reis, 2007, pp. 307-349).

Years	**Number of elementary schools**	**Number of students**	**Number of secondary schools**	**Number of students**	**Number of high schools**	**Number of students**
1977	174	18220	22	6895	10	3667
1980	166	18113	21	7137	11	3556
1983	165	19580	21	7411	11	3792
1986	160	20781	22	7130	13	3969
1989	150	16488	24	12226	14	4006
1992	145	15964	27	10026	16	6406
1995	91	15526	29	9167	14	5649
1998	103	16128	31	9213	18	5581
2001	94	15584	29	9867	23	5764
2004	95	16327	28	9712	22	6133

6.3 School Buildings of the Post-division

Following 1974, during the years of political, social, and economic turbulence, the education and building sectors have been affected. After the geographic separation, a considerable number of Greek Cypriot schools, both rural and urban, were left in the north. These schools were used by the displaced Turkish Cypriots from the south, as well as by the new Turkish immigrants. A consequence of this was the diminishing of the demand for boarding in town schools. One other factor for this disappearance was the improvement of transportation. In due course, certain annexes based on functionality were made to some school buildings dating from the 1960s and early 1970s. The annexes designed were usually single-storey for elementary schools and two-storey for higher level schools. The economically driven architectural approaches used in such prototype annexes, designed by the Ministry of Education, were not always successful. Most of the annexes built in contemporary style blended relatively well with the schools built after the mid-1950s in modern style. However, similar annexes made to old schools, such as the neo classical Gazi Elementary School, often created a contrasting and inharmonious appearance.

The abundant number or Greek Cypriot school buildings left in the north were mostly built in modern style, but the ones that are located in suburbs are mainly in Greek revival style. These modern schools' most distinctive and common feature is the use of balcony as circulation. In general, Turkish Cypriot schools had a more introvert character, where a typical spatial layout consists of a circulation axis in the middle of classrooms on either side, or a single row of classrooms connected by a covered corridor. The extensions and annexes made for the abandoned Greek Cypriot schools are in parallel to their original character. The balconied corridors are more suitable for the Cypriot climate since it increases the air circulation and also provide ample light

to the classrooms. What is perhaps more important is that they provide a visual link between classrooms and the open space, where students gather or play. The same prototype annexes designed by the Ministry of Education for the abandoned Greek Cypriot schools were later employed for schools built by Turkish Cypriots, resulting in a homogeneity in school building types (Figure 6.1).

The construction style of both public and governmental buildings during the 1980s and the 1990s reveals a direct evidence of the lack of financial support provided during these years. In a recent study, Gürdallı and Koldaş (2015) conducted a number of interviews with state architects who have designed several governmental buildings after the establishment of TRNC. Their research showed that the architects' main concern was functionality and practicality. This concern was also valid in educational buildings.

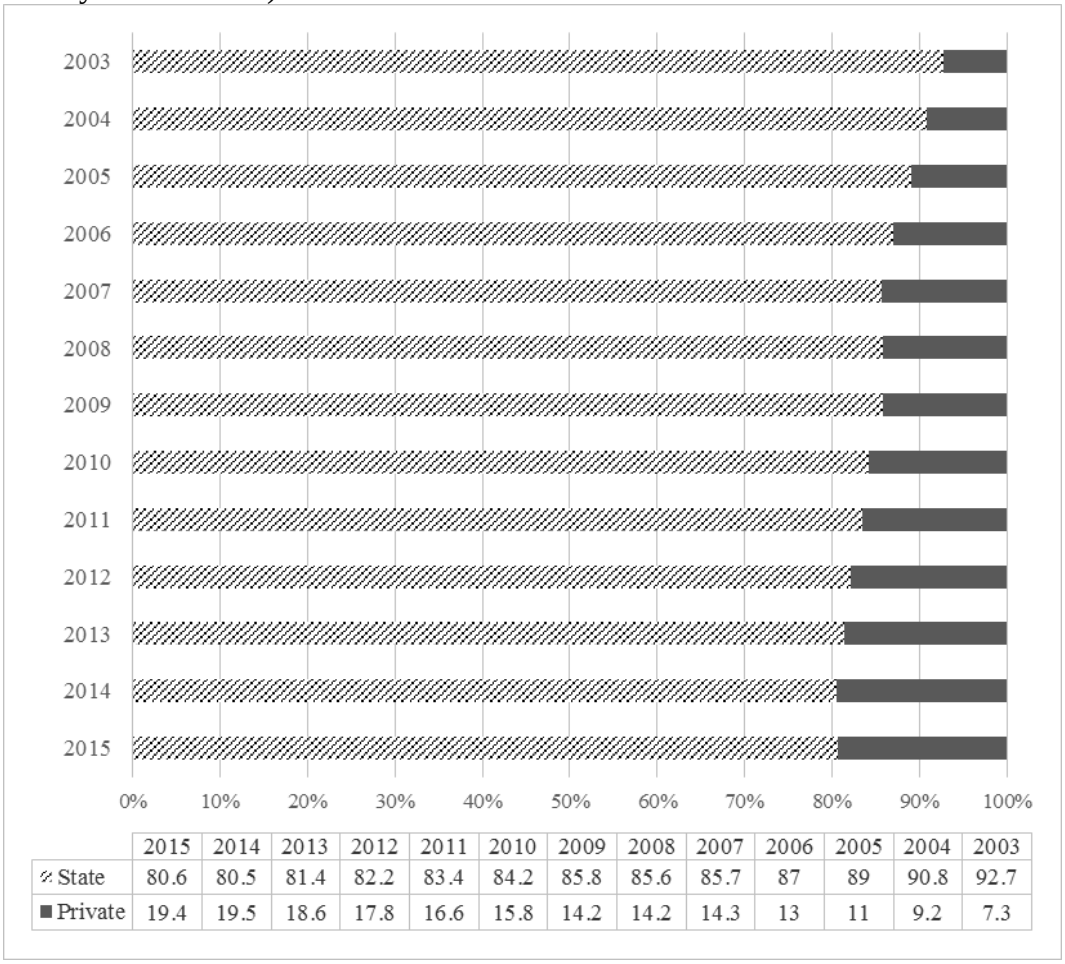
Figure 6.1. The balconied Şehit Ruso Secondary School in Nicosia, originally a Greek Cypriot School (left), and a recent annex to Oğuz Veli Secondary School, a Turkish Cypriot built school in Kyrenia (right).

With the increasing level of adaption of gender equality, separate boys and girls schools were transformed into mixed schools. Gender separated schools now exist only for industrial and vocational school types. However, the majority of these schools attract mostly boys.

Addressing the growing needs, new school buildings have been constructed from the beginning of the 2000s. Two most representative examples are the secondary schools Bayraktar Turkish Maarif College in Nicosia and Oğuz Veli Secondary School in Kyrenia. Both of them speak exactly the same architectural language as the rest of the Turkish Cypriot government buildings of the same period. In addition, decorative red bricks are partially used in school buildings as a continued school image prevailing since the 1960s.

As a consequence of socio-economic changes since 1974, public schools' image has also changed. Recent public schools respond mainly to basic functions, and apparently no aspirations for innovative designs for learning environments are present. Today, these schools serve mostly working class Turkish immigrants. Turkish Cypriot families who can afford to pay high fees prefer to send their children to private schools, which are in considerably better physical condition. The private schools, growing in numbers since the 1990s, follow the same curriculum as the public schools but offer better facilities and teaching aids. The growth of private education in north Cyprus is shown in Table 6.2. The demographic transformation of the population has given rise to class differences, and the upper middle class population who presumably derived much pride from their cultural capital, favoured the private schools. The rising demand for private schools can be observed in each level of education.

Table 6.2. Percentage growth of private education in north Cyprus (Source: TRNC Ministry of Education).



	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
State	80.6	80.5	81.4	82.2	83.4	84.2	85.8	85.6	85.7	87	89	90.8	92.7
Private	19.4	19.5	18.6	17.8	16.6	15.8	14.2	14.2	14.3	13	11	9.2	7.3

The rise of fundamentalist regime in Turkey during the last decade had noticeable effects on Turkish Cypriot educational policies. In response to demands for religious based education emerged from the new demographic transition, the regime in Turkey funded and supported Islamic institutions in north Cyprus. The most prominent project is the Hala Sultan Islamic Complex, which occupies a very large area on the main road joining the capital Nicosia to Famagusta, and consists of a theological college, student dormitory building and a mosque. The Hala Sultan Theological College, the first college of religious status in north Cyprus, was completed in 2013. The mosque, which is under construction, will be the largest in Cyprus. The college stands out not only with its dissimilar education but also with its gigantic size and bearing architectural

references of the Seljuk period. The religious based curriculum of the College is often criticised by the Teachers' Union, pointing to a threat to the future of Turkish Cypriot secular education.

6.3.1 Bayraktar Turkish Maarif College (BTMK)

Completed in 1999, the BTMK was built to meet the needs of the growing population. The school is located in the then outer skirts of the northern Nicosia's city centre. Due to the urban sprawling of Nicosia the location of the building now lies in the intersection of the newly established residential quarter and the new city centre. The school was designed by the Project Design Centre of the Eastern Mediterranean University. The building is in a broken 'V' shape. The main administrative body of the building is located on right and left wings by the entrance. The left and right wings of the building is interconnected by a hexagonal prism (Figure 6.2), which houses the entrance lobby on the ground floor and the library on the first floor. The main entrance is well-lit by continuous aluminium framed windows. The use of extensive aluminium frames with equally distributed square and rectangular windows form the main characteristic of the building. Once entering the lobby, the circulation is equally distributed in the two wings of the building. There are also additional entrances from both wings, which provide an ease of access and alternative routes. The classrooms are symmetrically distributed on both wings in each floor. The upper floor is free from administrative offices and it includes only the classrooms, laboratories and library. The façade of the concrete building is partially cladded with red brick. This application recalls a lingering grasp of sense of identity of the red-bricked school buildings built during the Republic era.

Figure 6.2. Front view of BTMK, Nicosia.

In the same year BTMK was built, Turkey granted funding for the construction of a new school in Nicosia. The Bülent Ecevit Anatolian Lycée (BEAL) is almost an identical copy of BTMK, but smaller in scale, occupying a significantly smaller land. Having two almost identical school buildings in a small city contributes to identifying an architectural style of school buildings at the beginning of the new millennium.

6.3.2 Atatürk Teacher Training Academy

An additional teachers training college to the existing one in Morphou was built in Nicosia in 1958 (Figure 6.3). It was intended to serve both Turkish and Greek Cypriot students of both genders. However, following the intercommunal fights of 1958, the Teachers Training College was divided and the Turkish Cypriot students were transferred to another building near Paphos Gate for security reasons. The College serving to Turkish Cypriot students had to move to another building again after the 1963-64 intercommunal fights. A striking feature of the Teachers Training College in the early years of the Republic was that almost all teachers were selected from Turkey. Just after the Turkish intervention of 1974 the College was moved to Kyrenia, functioning there until 1990, in which year it moved to a building in Küçük Kaymaklı district of Nicosia. Finally, before moving to the current premises, the College was hosted at the top floor of the Atatürk Elementary School from 1994 to 1999.

Figure 6.3. Nicosia Teachers' Training College (Source: *Cyprus Mail*, 27 October 2010). The building is one of the most representative public buildings belonging to the British mélange policy.

The new building, completed in 1999, is situated in the Hamitköy district of Nicosia (Figure 6.4). Around the same time a new law was passed which granted the college the sole authority to train elementary school teachers, changing its name to Atatürk Teachers Training Academy.

Figure 6.4. Views from the entrance and assembly area of Atatürk Teachers Training Academy, Nicosia.

Apart from the prevailing use of decorative red bricks on the façade, the building stands unprecedented with its architectural details. The unusual organic shaped layout forms a semi-open courtyard with a combination of both angular and axial boundaries. The vertical circulation is distinguished by cylindrical projection and lit by glass brick material. The exposed structural frame, such as the extension of the slab and columns, contributes to the configuration of the main physical character of the building as well as functioning as a sun shading element. Once entering the hall, the circulation is provided by two wide corridors, loaded with offices and classrooms. The same configuration is recurring on the first floor. Although this school is for higher level of education the spatial configuration is not as diverse as the given level of education. A notable difference from the previous building of Teachers Training College, the

administrative offices are individually arranged rather than one or more common rooms.

6.3.3 Oğuz Veli Secondary School

The school building is located in a mainly commercial district of Kyrenia, and was completed in the year 2000. It was initially intended as an elementary school. Not long after, in 2008, the school was transformed into a secondary school, with some minor alterations. Due to increase of population and demand, 12 additional classrooms were added in 2010. It is named after Oğuz Veli (1926-2008), a prominent Turkish Cypriot educator, and an ex General Director of Education. It was designed by the Construction Works Department of the Ministry of Education (Figure 6.5).

The initial layout of the building included a courtyard in the middle, intended to serve as a social space for children. The courtyard allowed a practical observational control of the children's activities. However, the noise factor was not anticipated, and soon after the courtyard was converted into a theatre hall, responding also to the need for cultural activities.

Figure 6.5. Front and left side (West) views of Oğuz Veli Secondary School, Kyrenia.

The articulation of the building's façade replicates the architectural details of governmental buildings of TRNC during the last decade of the 20th century, in particular, the repetitive windows with concrete sun shading elements. Like other school buildings of this period, red bricks are used for decorative purpose. The entrance is emphasised by a regular trapezium shaped porch. Left and right wings of the entrance lobby are the teachers' rooms. The symmetric layout of the building on the ground level is functionally divided into two; administrative offices and cafeteria on the left, classrooms on the right. Staircases from both wings lead to the upper floor which houses classrooms, laboratories, and a library.

Chapter 7

FORMAL, FUNCTIONAL AND SPATIAL ANALYSIS OF TURKISH CYPRIOT SCHOOL BUILDINGS

In Chapters 3-6 the architectural development of school buildings was examined with an emphasis on social, political, cultural and educational developments within the selected timeframe. This chapter elaborates the three different methods of analysis, aiming to achieve a comparative and in-depth understanding as well as mapping the temporal transition of the designs of selected Turkish Cypriot school buildings in Cyprus. Section 7.1 considers functional characteristics and the environment of each schoolyard, which is important in depicting school culture. Section 7.2 includes the second analysis method, incorporating formal characteristics and functional distribution of the selected buildings. The third analysis method presented in Section 7.3 assesses the relationship of spaces by spatial analysis using justified graphs and inequality genotypes obtained for each school building.

7.1 Physical and Functional Analysis of Schoolyards

In Tables 7.1-7.11 the school environment and courtyard properties of each school are examined. The functional analysis of buildings in the vicinity of each school is highlighted to have an understanding of their environments around the times they were built. The accessibility to the buildings and to the school sites from the main road are shown. In certain schools where the student and administrative staff entrances differ, this is shown in arrows of different colours. The main entrance and façade features, such as materials, windows and balconies, as well as a view from the backyard are photographed for a relational understanding of building and schoolyard properties. A

combined sketch of building, yard and street is included for further consideration of visual and physical connections and the control of the premises. The facilities and activities that take place in the schoolyard are also highlighted in order to illustrate how and why in each different time period these functions differed and where these facilities were located.

Table 7.1. Physical and Functional Analysis of Schoolyards: Idadi School Building

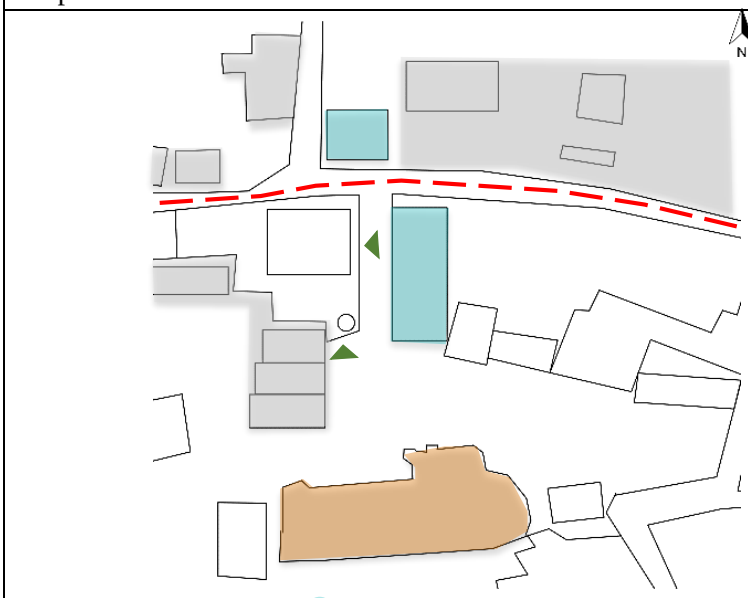
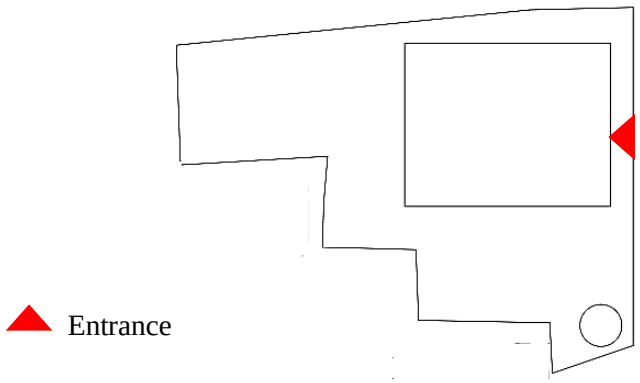
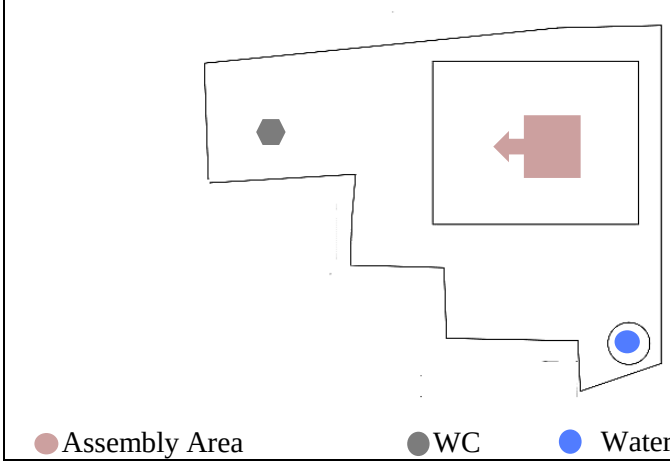
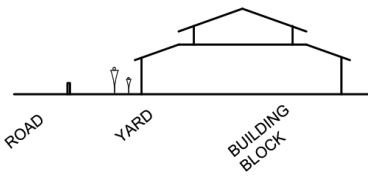
Map	Views From Schoolyard
	 Main Entrance  North View
Accessibility	 Water Tank
	
Functions in the courtyard	Building and street relation
	

Table 7.2. Physical and Functional Analysis of Schoolyards: Victoria

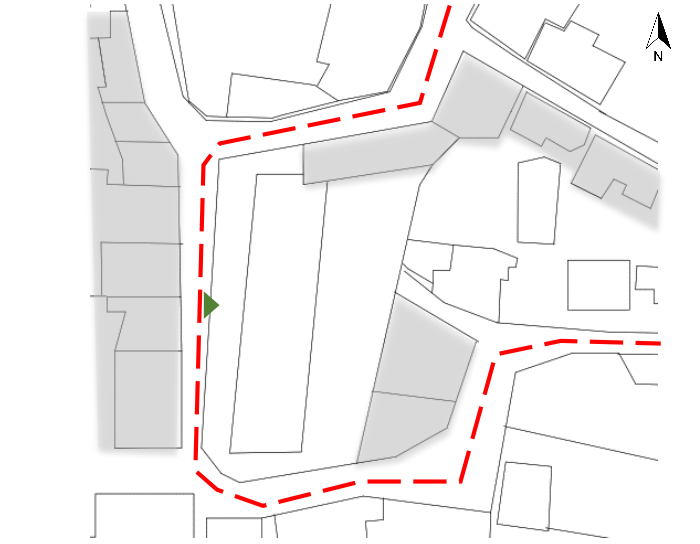
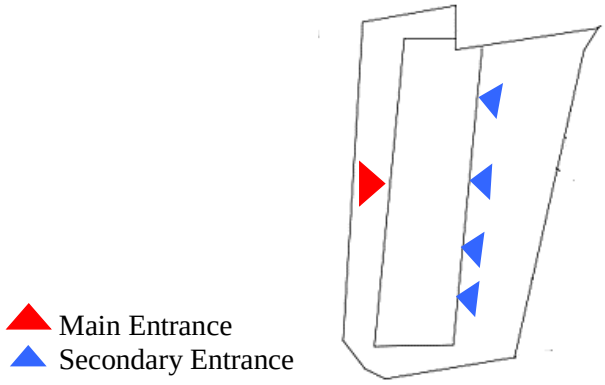
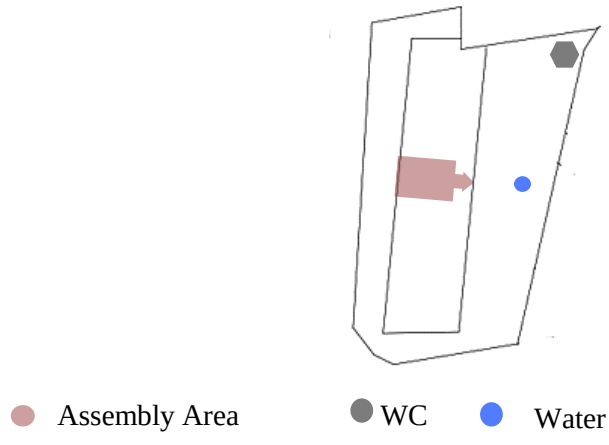
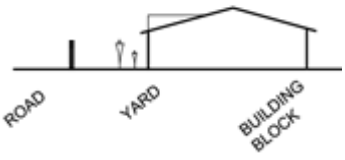
Map	Views From Schoolyard
	 Main Entrance  Back View  Front Yard
Accessibility	
	
Functions in the courtyard	Building and street relation
	

Table 7.3. Physical and Functional Analysis of Schoolyards: Gazi Elementary School

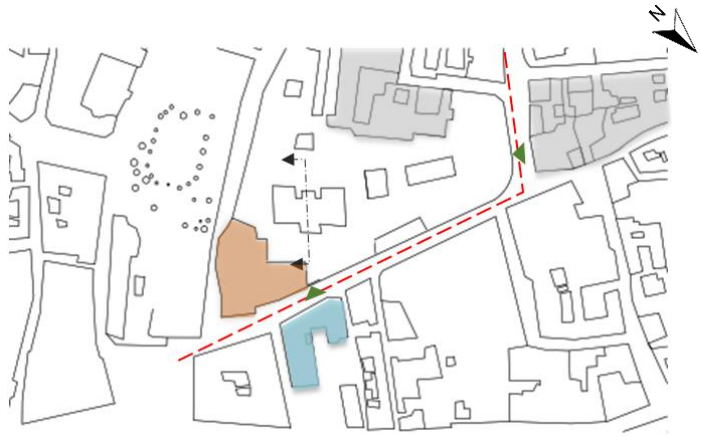
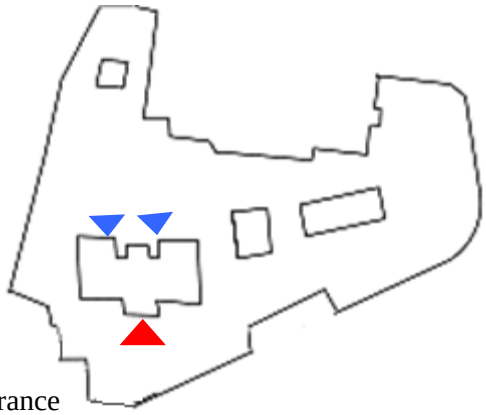
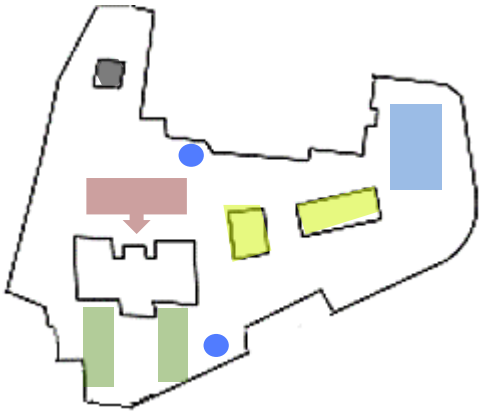
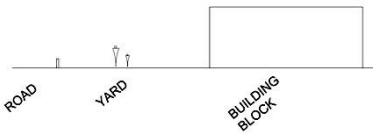
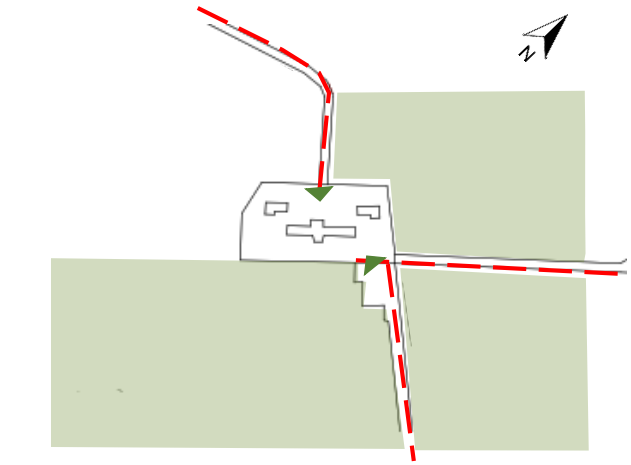
Map	Views From Schoolyard
 Main Road Site Entrance Ottoman Bath Church Residential Area	 Front Façade  Back View  Courtyard View
Accessibility:  Entrance Student Entrance	
Functions in the courtyard:	Building and street relation
 Assembly Area Sports Area Gardening WC Water Tank Annex	 ROAD YARD BUILDING BLOCK

Table 7.4. Physical and Functional Analysis of Schoolyards: Teacher's Training College

<table>
<tr><td>Map</td><td>Views from Schoolyard</td></tr>
<tr><td> 
</td><td> 
Main Entrance

North View

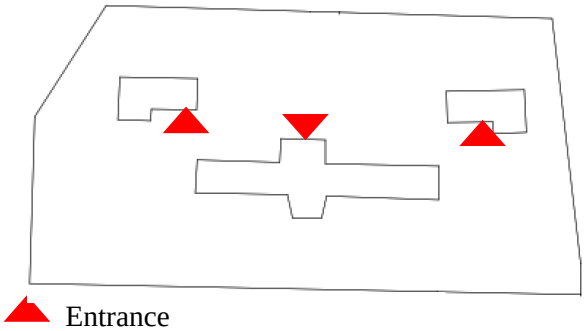
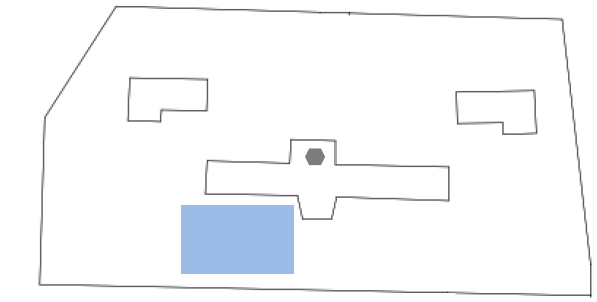
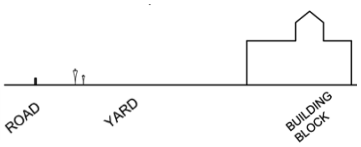
Classroom Block</td></tr>
<tr><td>Accessibility:</td><td></td></tr>
<tr><td> 
</td><td></td></tr>
<tr><td>Functions in the courtyard:</td><td>Building and street relation</td></tr>
<tr><td> 
</td><td> 
</td></tr>
</table>

Table 7.5. Physical and Functional Analysis of Schoolyards: Turkish Boy's Lycée

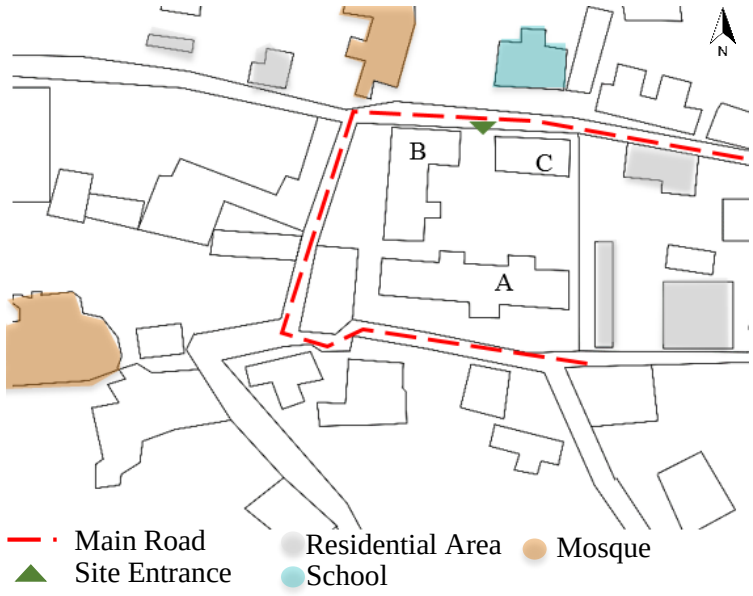
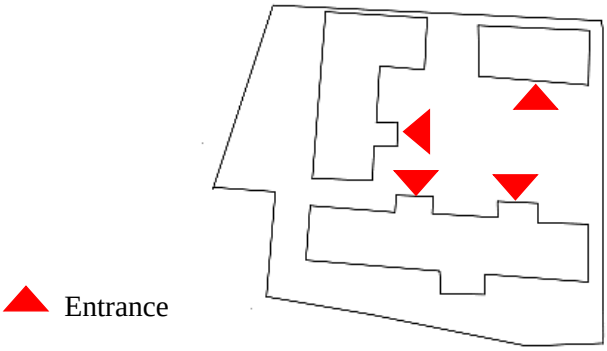
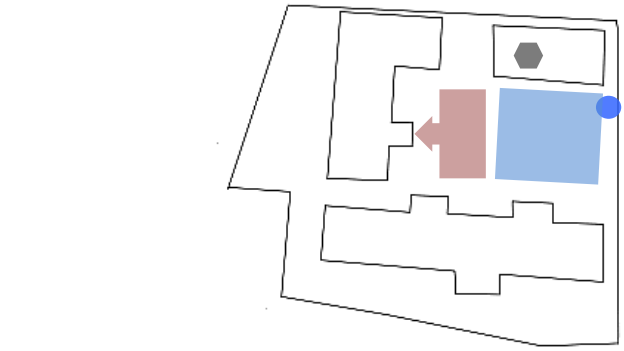
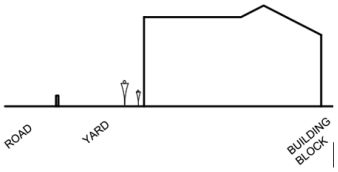
Map	Views From Schoolyard
	 Main Entrance  Block A  Block B  Block C
Accessibility	
	
Functions in the courtyard	Building and street relation
	

Table 7.6. Physical and Functional Analysis of Schoolyards: Ataturk School Building

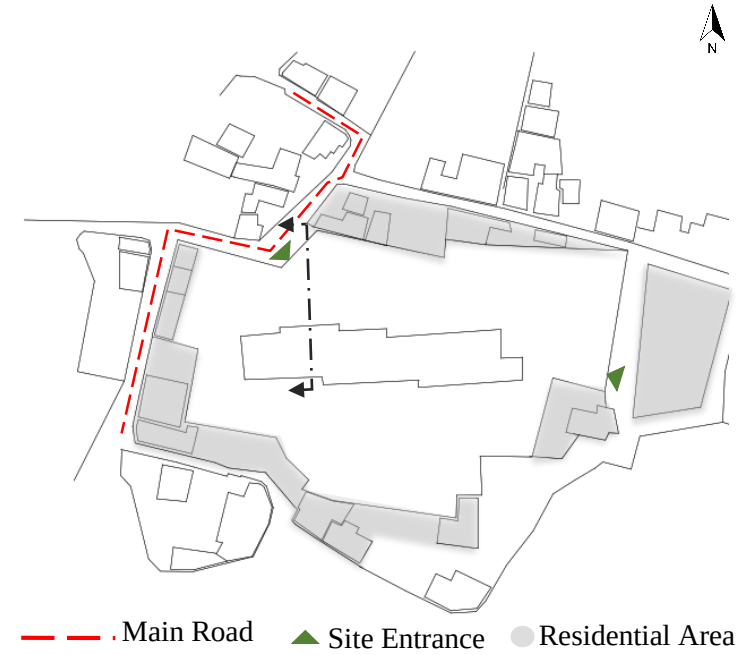
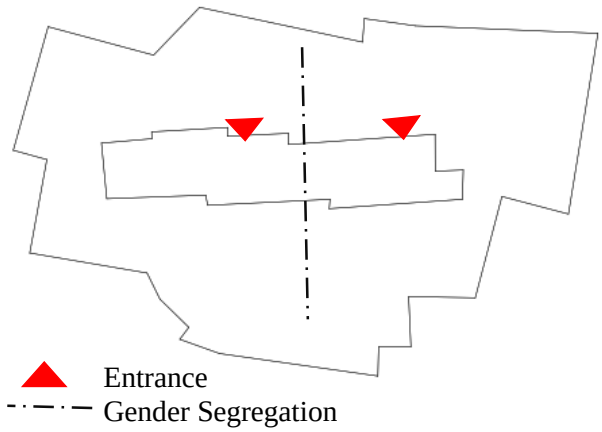
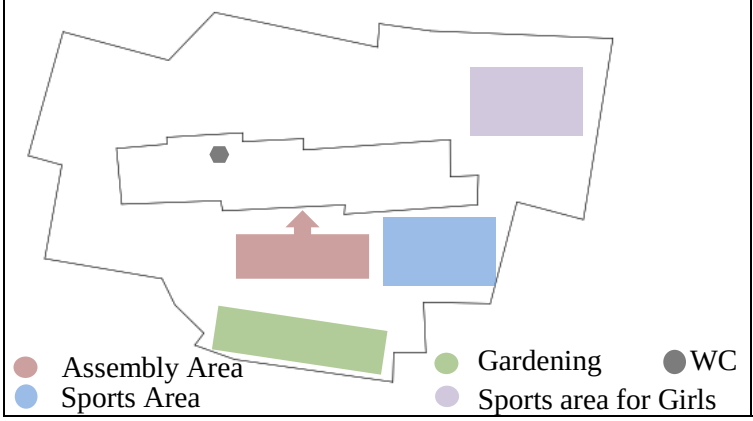
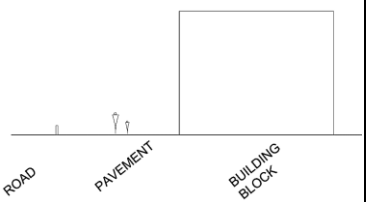
Map	Views From Schoolyard
	 Front View  Back View
Accessibility	 Playground
	
Functions in the courtyard	Building and street relation
	

Table 7.7. Physical and Functional Analysis of Schoolyards: NKL

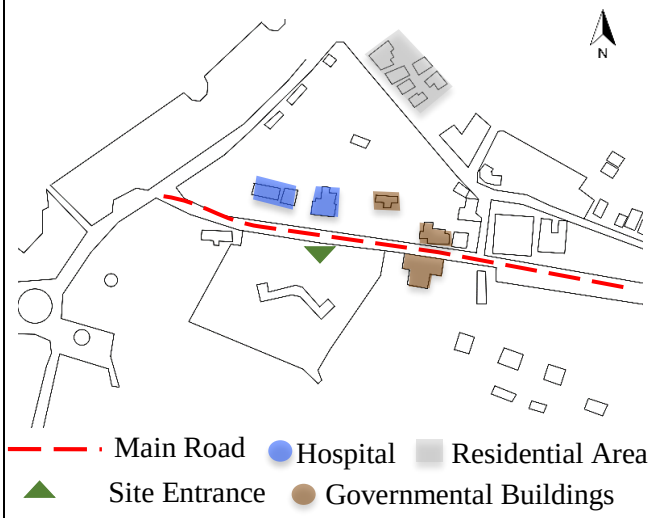
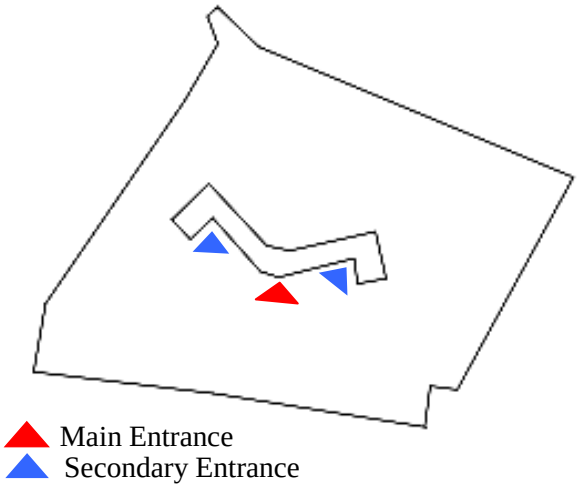
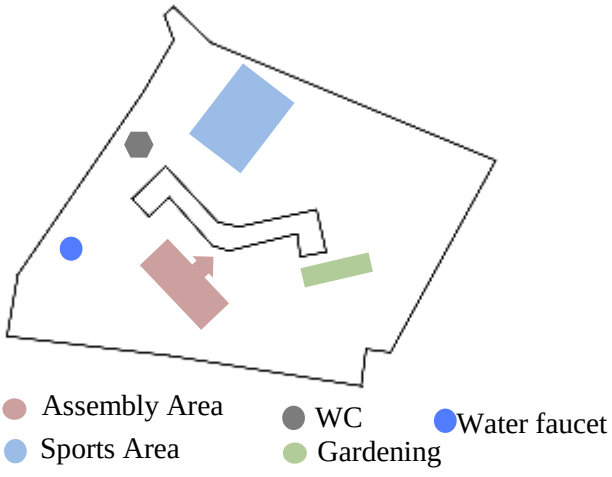
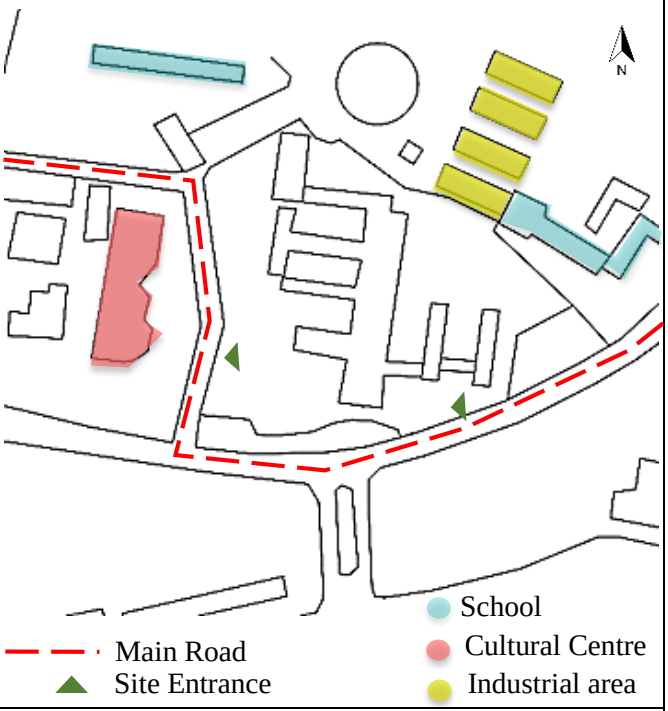
Map	Views From Schoolyard
	 Main Entrance  East View  North-West View
Accessibility	
	
Functions in the courtyard	Building and street relation
	

Table 7.8. Physical and Functional Analysis of Schoolyards: Turkish Girls' Lycée

<table>
<tr><td>Map</td><td>Views From Schoolyard</td></tr>
<tr><td> 
</td><td> 

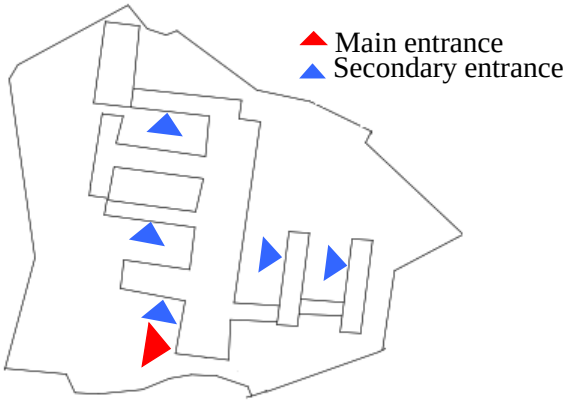
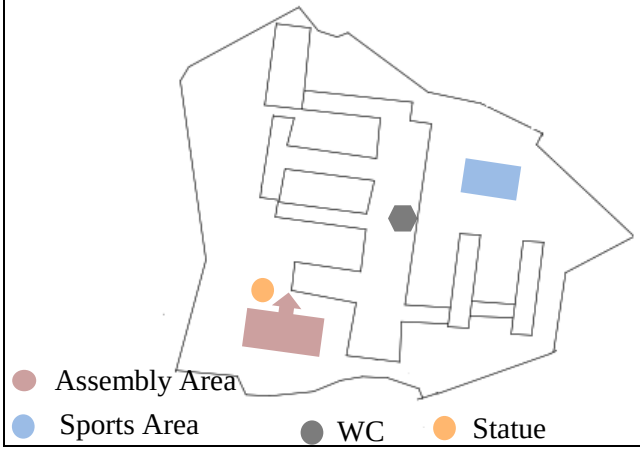
Main Entrance
 
Semi Open Circulation Between Blocks
 
North View</td></tr>
<tr><td>Accessibility:
 
</td><td></td></tr>
<tr><td>Functions in the courtyard:
 
</td><td>Building and street relation
  </td></tr>
</table>

Table 7.9. Physical and Functional Analysis of Schoolyards: BTMK

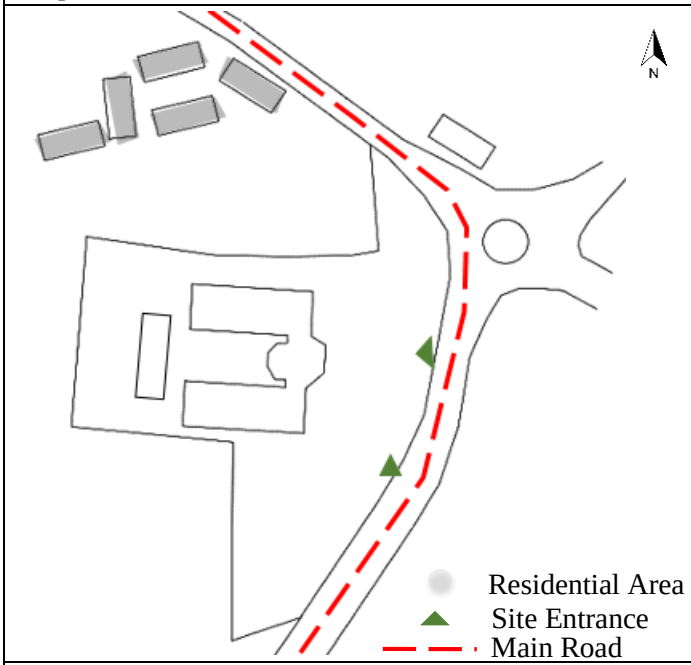
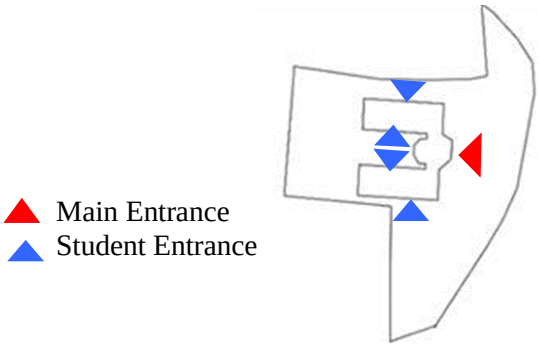
Map	Views From Schoolyard
	 Main Entrance  East Façade  Front Yard
Accessibility	
	
Functions in the courtyard:	Building and street relation
	

Table 7.10 Physical and Functional Analysis of Schoolyards: Atatürk Teachers Training College

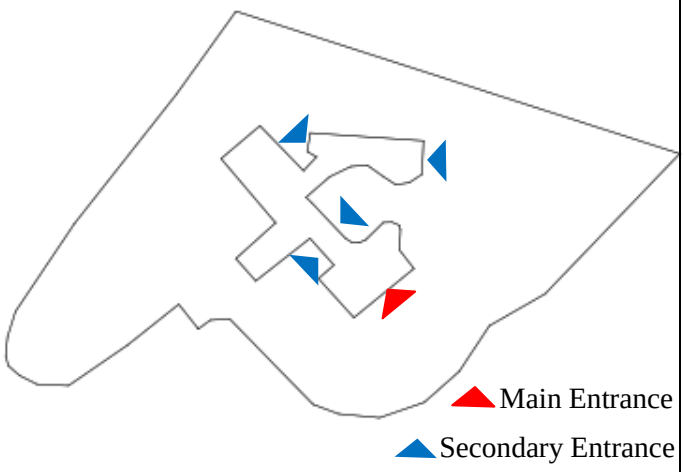
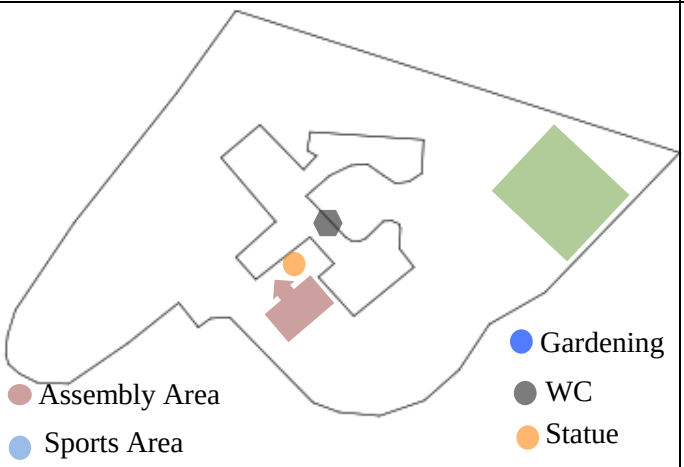
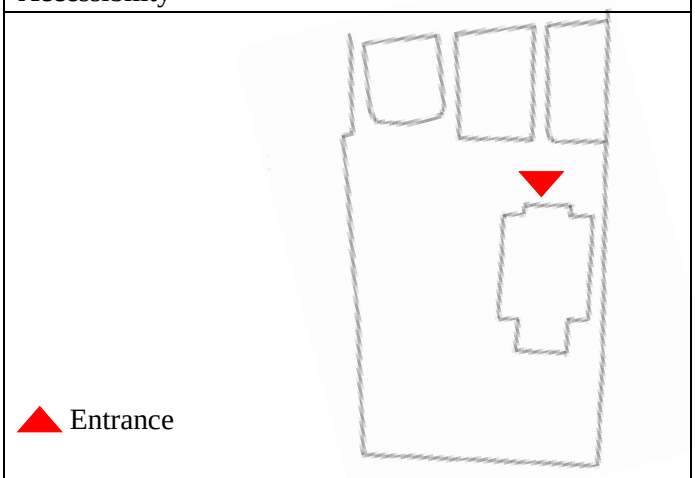
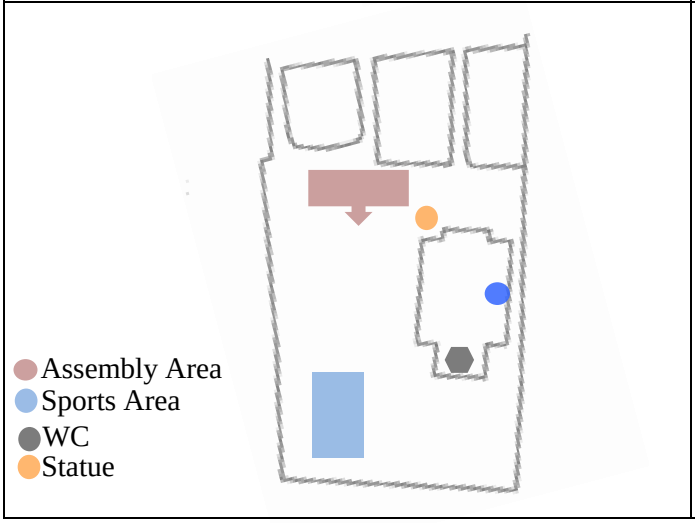
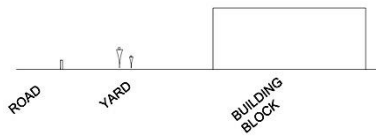
Map	Views From Schoolyard
	 Main Entrance  Back View
Accessibility	
	 Front View
Functions in the courtyard	Building and street relation
	

Table 7.11 Physical and Functional Analysis of Schoolyards: Oguz Veli Secondary School

Map	Views From Schoolyard
	 Main Entrance  West View  North-West View
Accessibility	
	
Functions in the courtyard	Building and street relation
	

Of all the periods considered, the early British colonial period poses a major difference in the school locations. They were located near mosques and residential areas due to the absence of vehicular transportation. The choice to build schools at a walking distance from the mosque (Özgüven 2004) followed the religious practice of the time for students to attend Friday prayers. Later, with the development of transportation and other circumstances, the choice of school location became more flexible. For example, the Teachers Training College was built in a fertile agricultural site in Morphou, mainly with the purpose of integrating agricultural courses to the curriculum. The admiration of modernity among the Turkish Cypriot elite considerably affected the religious practice to the extent that the traditional collective attendance of students to Friday prayers stopped around the early 1950s, resulting in a dramatic change in site selection for schools towards mixed-use environments in later years, such as districts of public and commercial buildings.

When the functional analysis of the courtyard is considered, one of the most evident observation is the location of toilets. In the early school buildings, like most buildings of the time, toilets and all sanitary functions were situated outside, detached from the main building (Figure 7.1). This traditional approach towards the sanitary norms was due to the lack of wastewater management and such facilities were detached in order to maintain hygiene. Among the Turkish Cypriot schools, the Nicosia Turkish Lycée was the first school building to incorporate the wet rooms within the building. However, the practice of placing the toilets outside the main building continued for several decades, overlapping with the present day practice of placing them within the building. Until the 1980s all schools had fountains in the schoolyards for drinking and other purposes. In the early British colonial period there were additional fountains in the schoolyards for male pupils to perform ablution before the prayers. However, with

the fading of this Islamic practice in schools such fountains disappeared from the schoolyards. Apart from this, there are no visible signs of religious practice in the schools and the yards.

Figure 7.1. The old latrines and recent toilets of Gazi Elementary School.

Towards the end of the 1950s with the rather more relaxed attitude of the British rule, the use of Atatürk figures and statues emerged. Although Turkish flag-raising ceremonies were still forbidden in some schools, it was conducted in a non-provocative manner in courtyards not visible from the main road.[29] In due course the assembly tradition has changed. After the establishment of the Republic in 1960, stone or bronze busts of Atatürk on marble pedestals on top of platforms in a monumental stance began to appear in school courtyards or front yards, all of which were sculpt by Turkish artists and given as present by Turkey. These busts are placed next to Turkish and TRNC flags in such a way that students face the busts during the assembly (Figure 7.2).

[29] In an interview with Dincer Raif (1938 -), a former deputy headmaster and student of Namık Kemal Lycée, recalled secret flag-raising ceremonies on Saturdays at the old building of the Lycée (Kutup Osman Tekke) as early as in 1953.

Figure 7.2. Statues and figures of Atatürk at assembly points.

Physical education has always been an integral part of school curriculum. At the height of Turkish Cypriot ethnic nationalism, shows of schools' gymnastic teams at national days were attended by vast admiring crowds. Each school had at least one area allocated for open-air sports activities. The rehearsals were held at such areas, and even in some cases where the sports field was large enough, the celebrations of national days took place there (Figure 7.3). Before the use of concrete as a construction material on the island, all of these sports areas were plain soil. Today most schools have sports halls designed for this specific purpose. If economic hardship was one of the reasons for this delay, an equally important reason was the lack of technological knowhow/availability of wide span construction.

Figure 7.3. 19 May celebrations in 1956 at the sports field of Namık Kemal Lycée (from the archives of Fehmi Tuncel).

The British colonial administration paid particular attention to gardening activities in elementary schools. Gardening was an integral part of school curriculum. The importance attached to school gardens were high, to the extent that the British administration regularly inspected the gardens and organised competitions for the best school garden. Both flowers and vegetables were grown and sold, creating an income to support the school budget (Feridun, 2011, p. 10). The 1964 intercommunal fights had adverse effects on various components of education, including gardening. This British induced school activity gradually lost its importance yet remained in the curriculum as an unpopular elective course. As can be depicted in Tables 7.1-7.11 there are no marked areas for gardening in schools built after 1964.

7.2 Formal and Functional Analysis

For the formal and spatial analysis, a model, which includes Clark and Pause (2005) diagrammatic analysis, is developed, as shown in Tables 7.12-7.22. The diagrams incorporate a combination of six analysis parameters. The analyses include the building layout type, as the layout type is an informative source regarding the utilization of the building and/or courtyard. In addition, the Clark and Pause analytic

parameters such as “circulation to use”, “repetitive to unique”, “additive/subtractive”, and “symmetry/balance” are integrated into the study. These analyses are performed by graphically simplifying the plans of the buildings to abstract drawings in order to enable a comparative analysis and understanding of fundamental form of each school building.

According to Clark and Pause “circulation” in a building determines how one perceives matters of “structure, natural light, unit definition, geometry, balance and hierarchy” (p. 4). In the following tables the indoor vertical and horizontal circulation is highlighted with regards the connectivity of each floor and the movement patterns. Circulation and use-space are the major dynamic and static components in buildings.

The relation of “repetitive to unique” elements is useful for the interpretation of pronounced features of the building and which functions occupy this distinctive fragment of the building and why it is so. This distinction can be found in form, based on the absence or presence of characteristics, which include the notions of size, shape, colour, material, texture, and location. In the tables, the repetitive and unique elements of the buildings are illustrated with different line weights.

The concepts of transforming a form by adding or subtracting elements to its volume, without changing its former general character, is named “additive and subtractive” formative approach. In the additive design, the building is constituted of distinguishable components which fabricates a dominant feature. In the subtractive approach, the building is identifiable as a whole from which fragments are subtracted where it generally results in spatial consequences. These formal considerations enrich

the built form by subtracting portions of an identifiable whole and simultaneously adding them back in the design.

“Symmetry and balance”, which can be defined as the perceptual/conceptual equilibrium and a specialized form of balance respectively, are the fundamental concepts of architectural design formed by spatial and formal elements. Balancing a composition requires arrangement of components and spaces in such a manner that the design is uniform, all components working in harmony. To achieve balance in a building, a component must be equivalent to another, identifying the differences in attributes. Symmetry, however occurs when the same component exists on both sides of the balance axis.

In addition to the above mentioned parameters, the distribution of three main groups of functions, the spatial distribution of classrooms, administrative spaces, and shared facilities (such as library, common room, laboratory, workshop, and dormitory) are highlighted with different colour codes for displaying the density.

Table 7.12. Formal and functional analysis: Idadi Boys' School

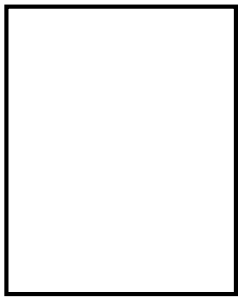
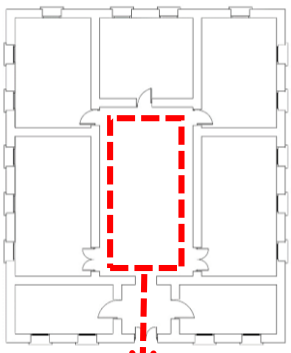
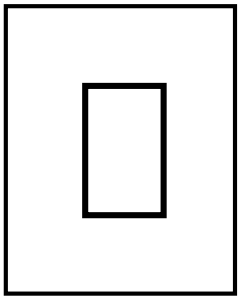
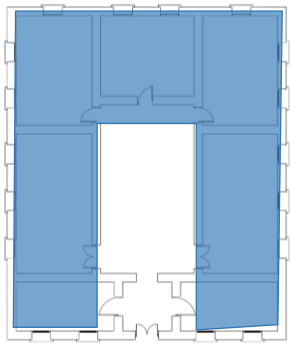
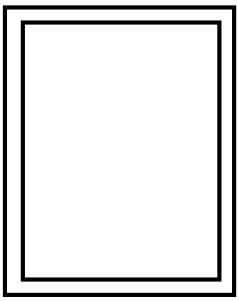
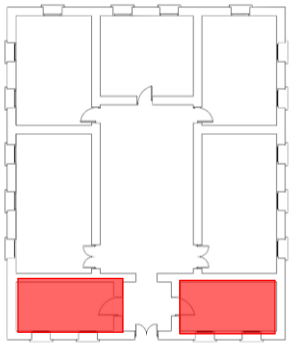
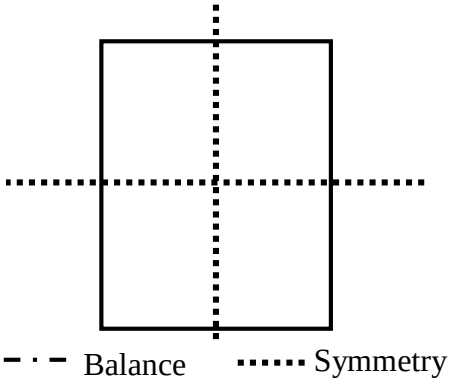
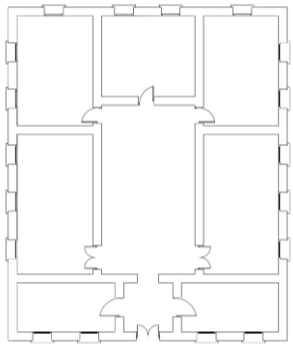
Layout type	Circulation
 Single Block Type	 Horizontal Circulation
Repetitive to Unique	Classrooms Spaces
	
Additive Subtractive	Administrative Spaces
	
Symmetry and Balance	Shared Facilities
 Balance Symmetry	

Table 7.13. Formal and functional analysis: Victoria Girls' School

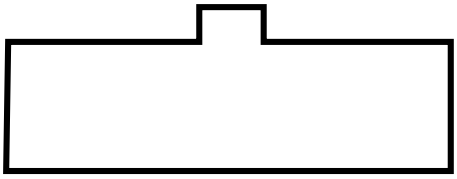
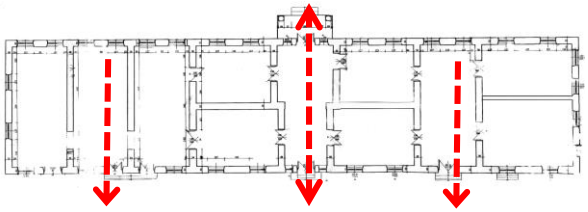
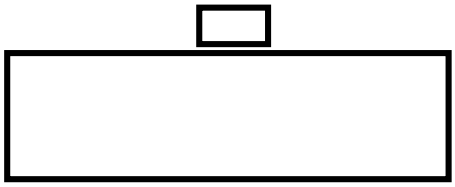
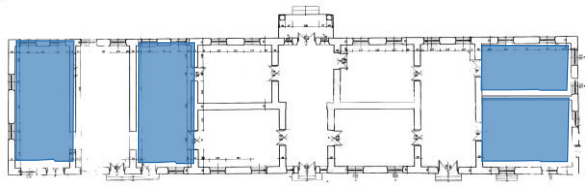
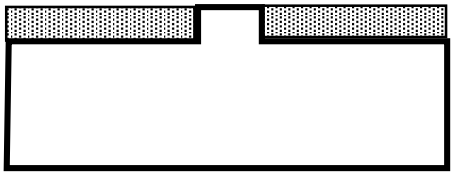
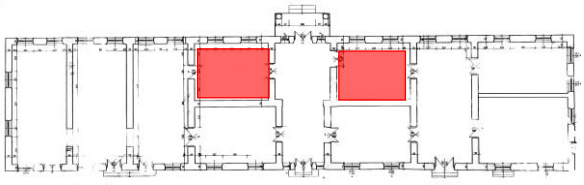
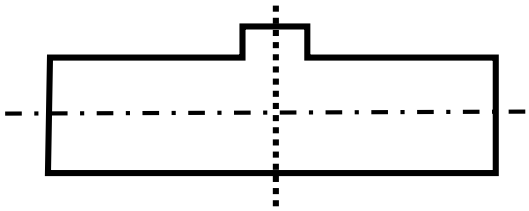
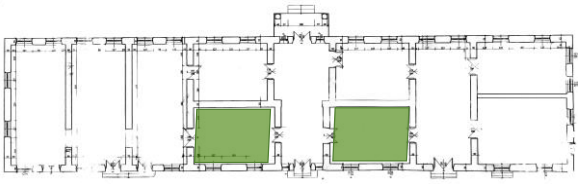
Layout type	Circulation
 Block Type Plan	 Horizontal Circulation
Repetitive to Unique	Classrooms Spaces
	
Additive Subtractive	Administrative Spaces
	
Symmetry and Balance	Shared Facilities
 Balance Symmetry	

Table 7.14 Formal and functional analysis: Gazi Elementary School

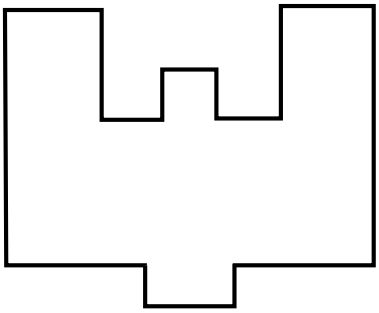
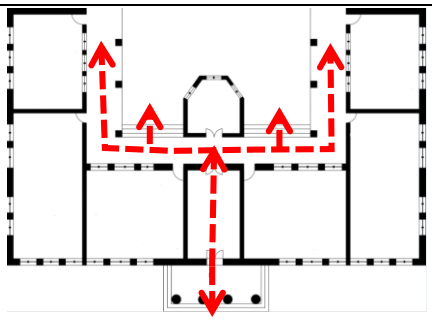
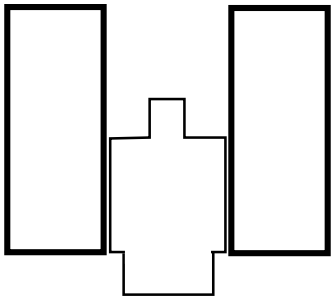
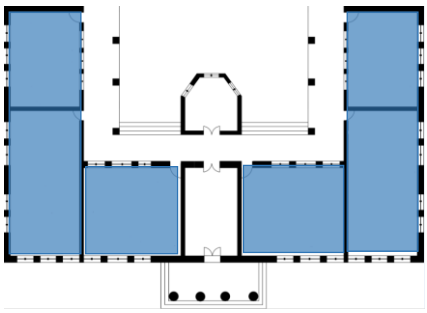
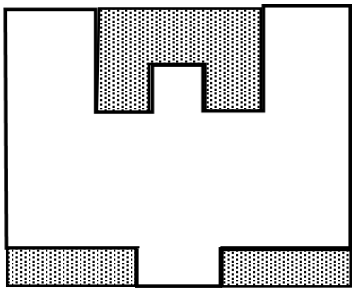
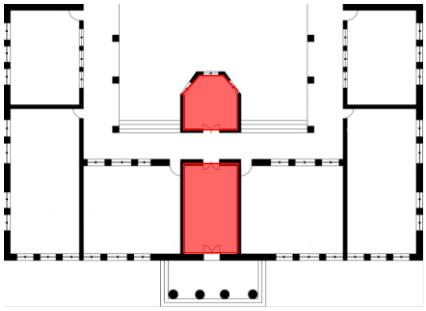
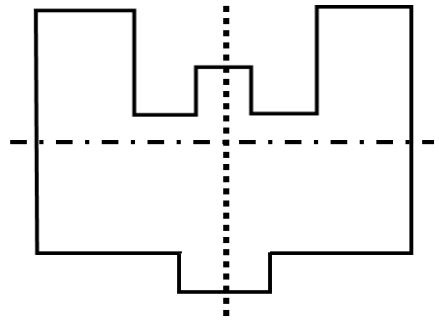
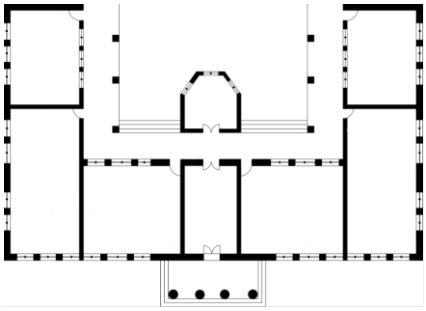
Layout type	Circulation
 Open courtyard with U shape	 Horizontal Circulation
Repetitive to Unique	Classrooms Spaces
	Ground Floor 
Additive Subtractive	Administrative Spaces
	
Symmetry and Balance	Shared Facilities
 Balance Symmetry	

Table 7.15 Formal and spatial analysis: Turkish Boys' Lycée

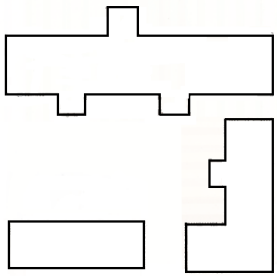
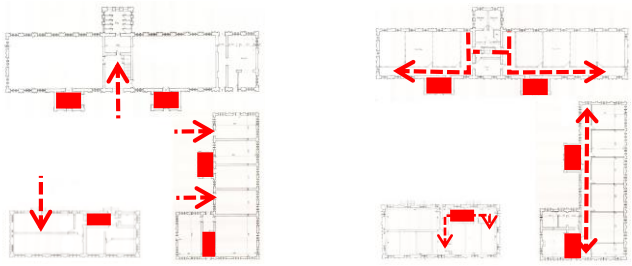
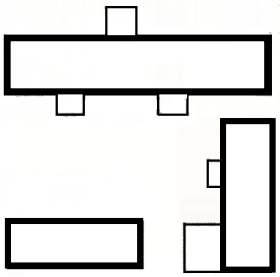
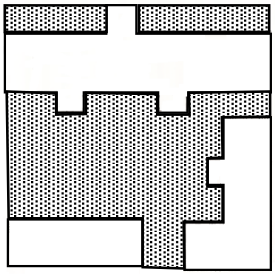
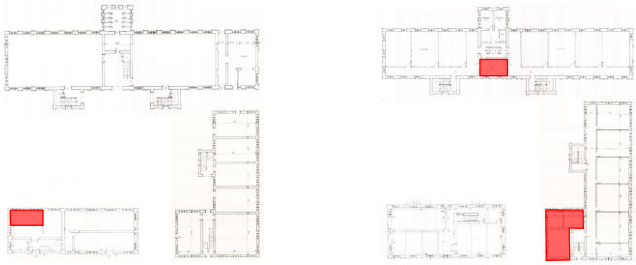
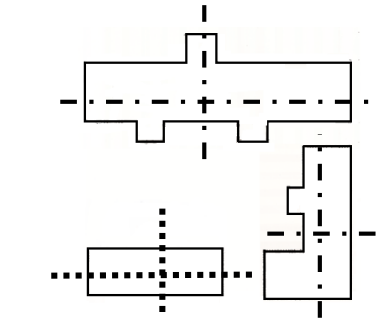
Layout type	Circulation
 Cluster Plan with Semi-Closed Courtyard	Ground Floor First Floor  Vertical Circulation Horizontal Circulation
Repetitive to Unique	Classrooms Spaces
	Ground Floor First Floor 
Additive Subtractive	Administrative Spaces
	Ground Floor First Floor 
Symmetry and Balance	Shared Facilities
 Balance Symmetry	Ground Floor First Floor 

Table 7.16. Formal and functional analysis: Teacher's Training College

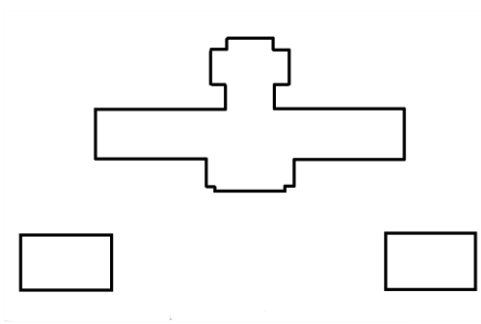
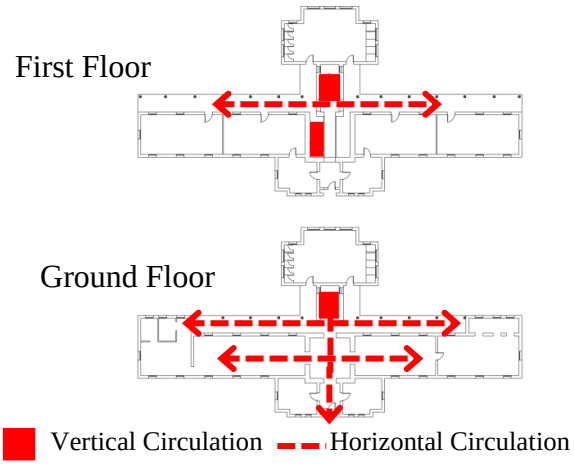
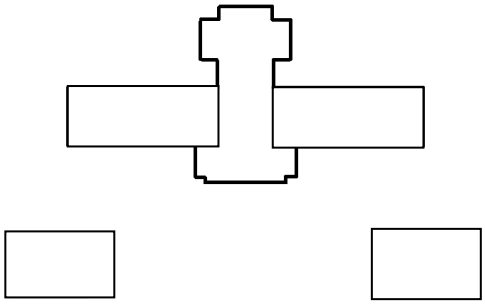
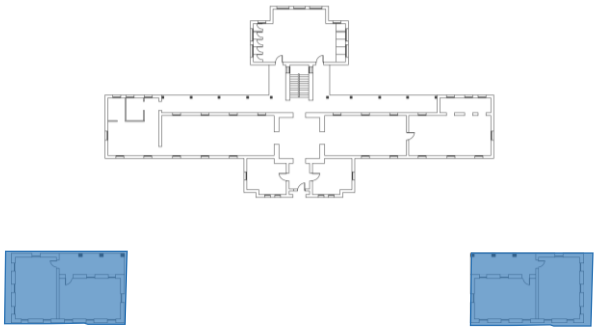
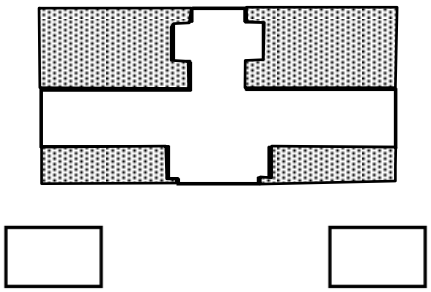
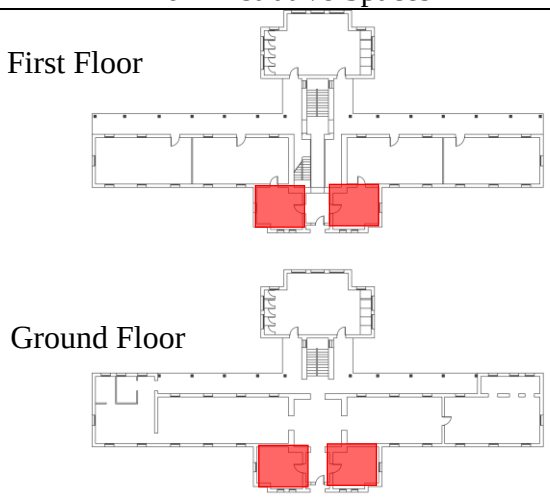
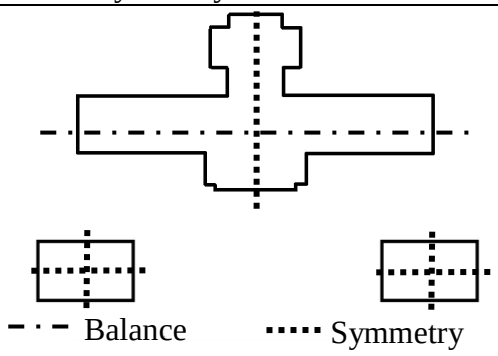
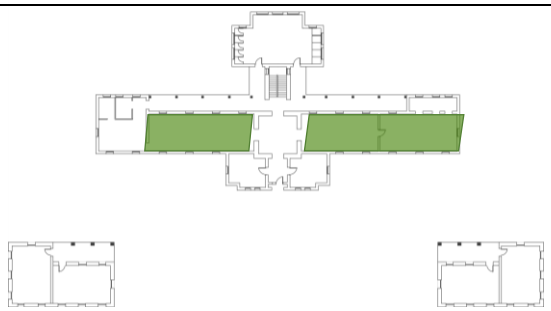
Layout type	Circulation
 Multi Block Plan Type	
Repetitive to Unique	**Classrooms Spaces**
	
Additive Subtractive	**Administrative Spaces**
	
Symmetry and Balance	**Shared Facilities**
	

Table 7.17. Formal and functional analysis: Ataturk Elementary School

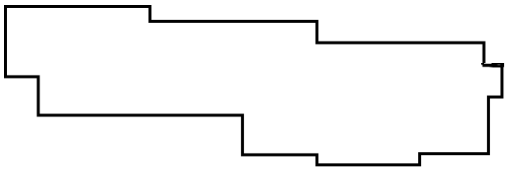
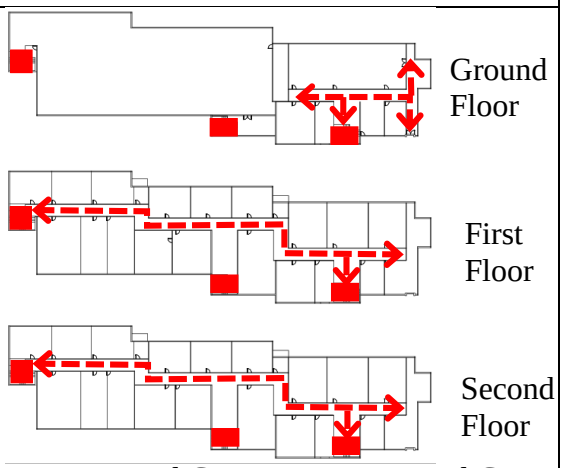
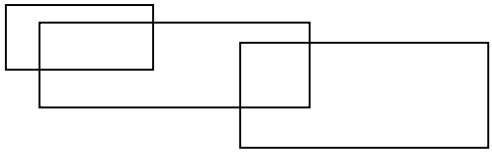
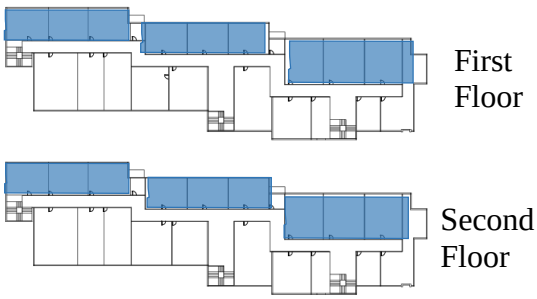
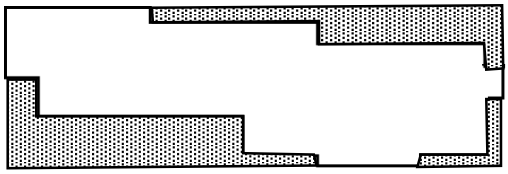
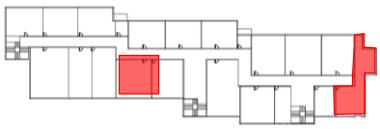
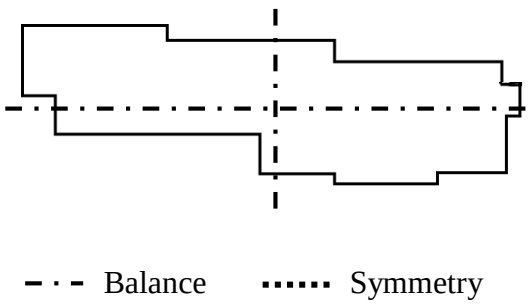
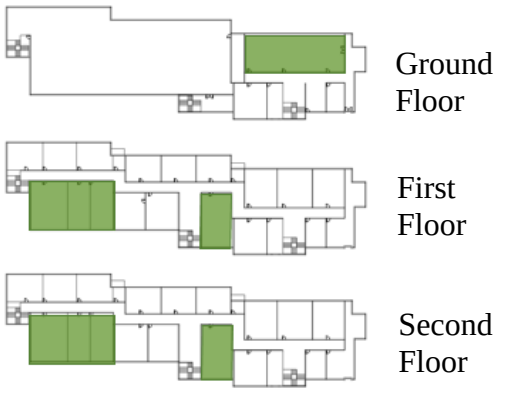
Layout type	Circulation
 Single Block Type	
Repetitive to Unique	**Classrooms**
	
Additive Subtractive	**Administrative Spaces**
	
Symmetry and Balance	**Shared Facilities**
	

Table 7.18. Formal and functional analysis: Namık Kemal Lycée

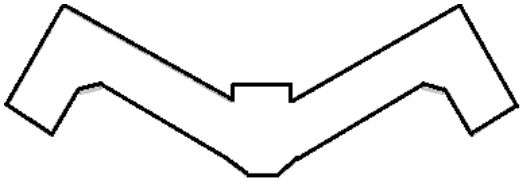
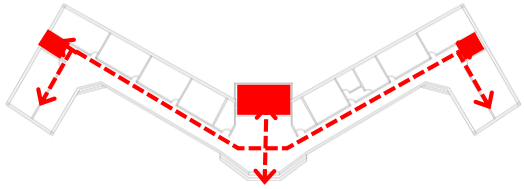
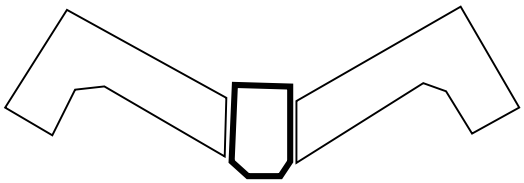
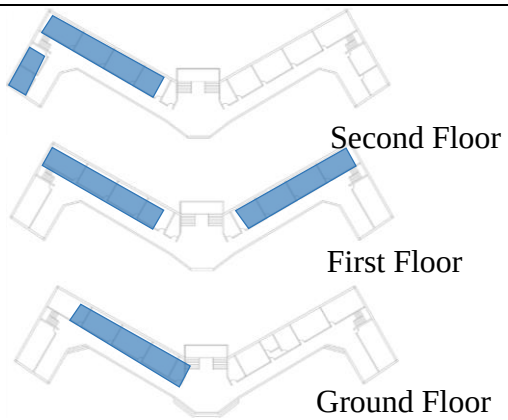
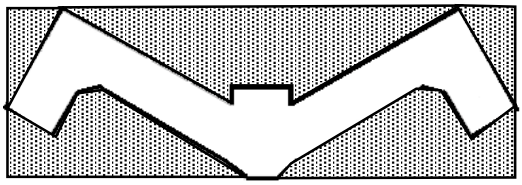
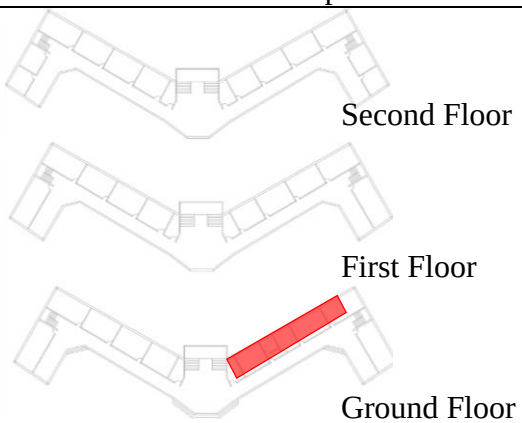
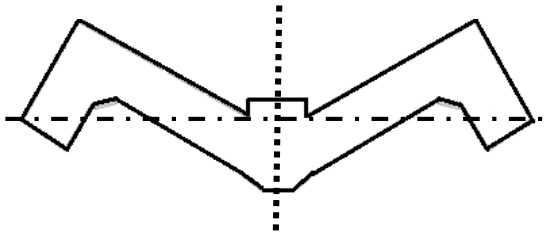
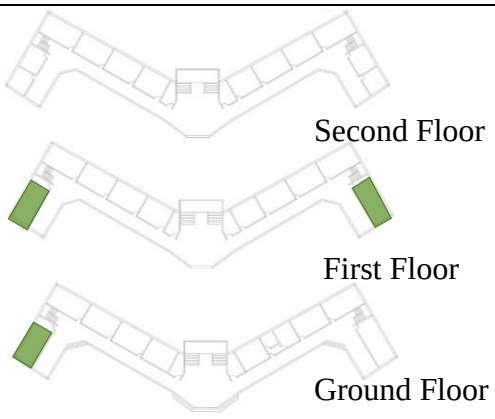
Layout type	Circulation
 Single Block Plane	 Vertical Circulation Horizontal Circ.
Repetitive to Unique	Classrooms Spaces
	 Second Floor First Floor Ground Floor
Additive Subtractive	Administrative Spaces
	 Second Floor First Floor Ground Floor
Symmetry and Balance	Shared Facilities
 Balance Symmetry	 Second Floor First Floor Ground Floor

Table 7.19. Formal and functional analysis: Turkish Girls' Lycée

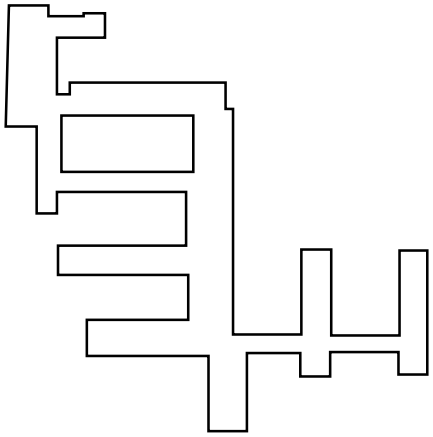
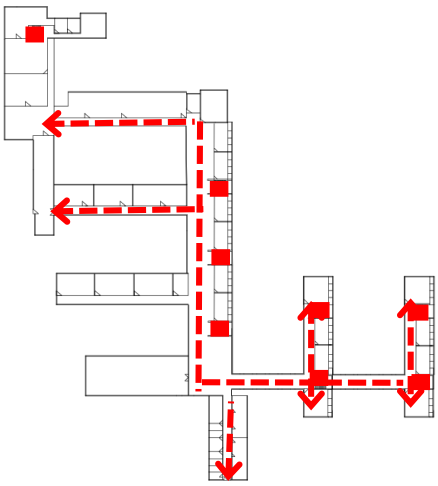
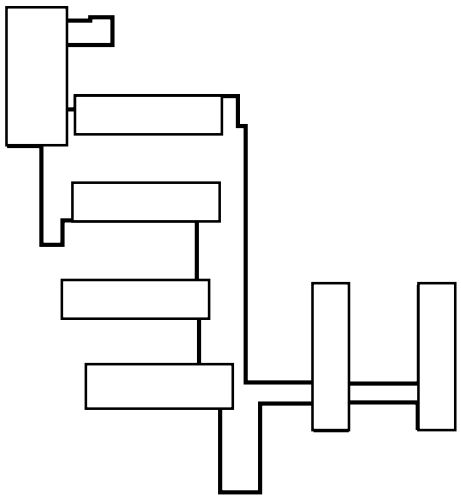
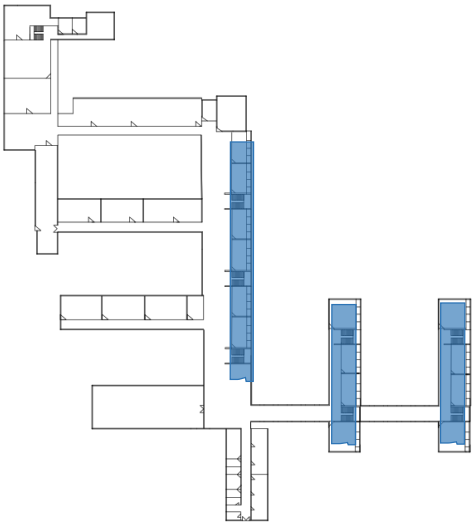
Layout type	Circulation
 Cluster Plan Type with Multi Courtyards	 Vertical Circulation Horizontal Circulation
Repetitive to Unique	**Classrooms Spaces**
	

Table 7.19. Formal and Functional Analysis: Turkish Girls' Lycée (Contd.)

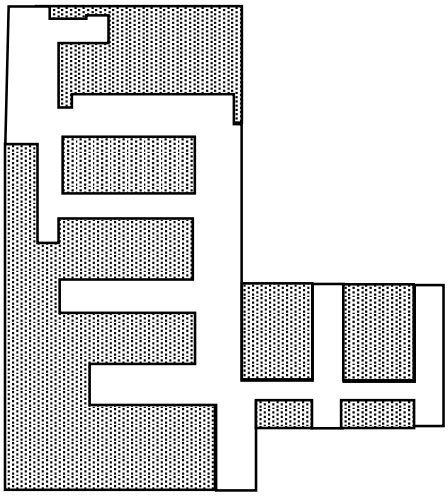
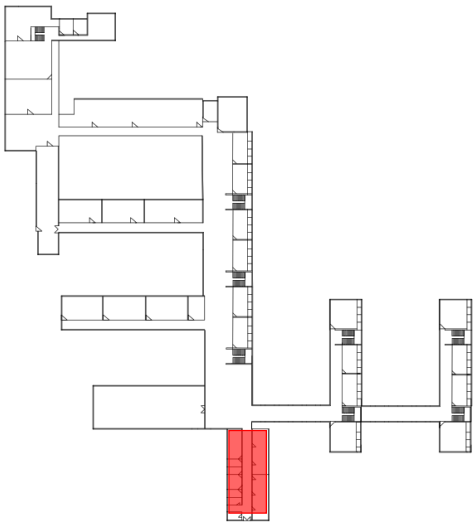
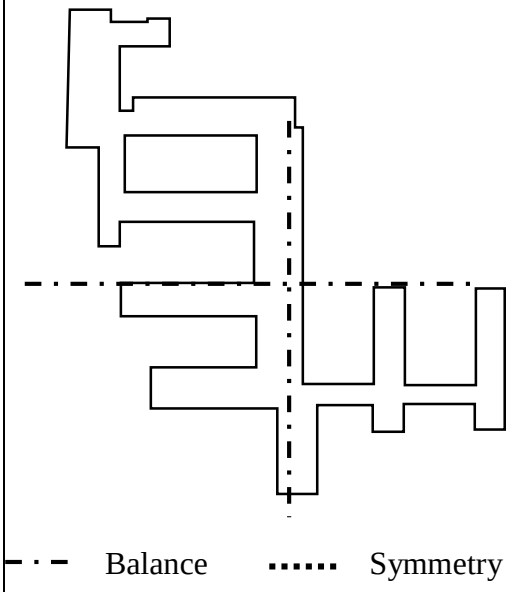
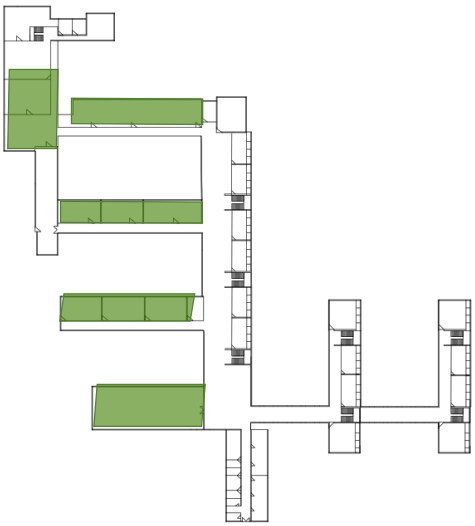
Additive Subtractive	Administrative Spaces
	
Symmetry and Balance	**Shared Facilities**
	

Table 7.20 Formal and functional analysis: BTMK

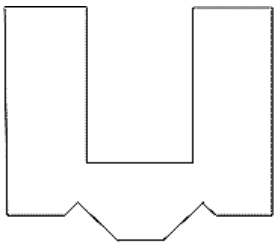
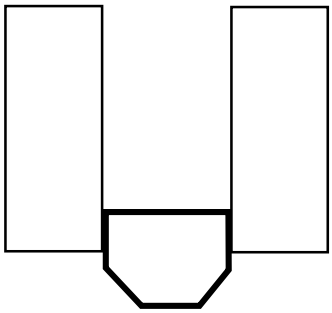
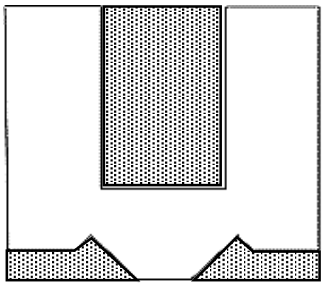
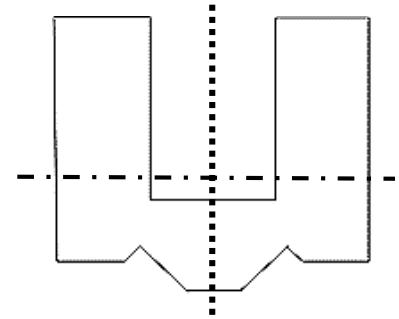
Layout type	Circulation
 Open courtyard with U shape	Ground Floor First Floor  Vertical Circulation Horizontal Circulation
Repetitive to Unique	Classrooms Spaces
	Ground Floor First Floor 
Additive Subtractive	Administrative Spaces
	Ground Floor First Floor 
Symmetry and Balance	Shared Facilities
 Balance Symmetry	Ground Floor First Floor 

Table 7.21 Formal and functional analysis: Ataturk Teachers Training Academy

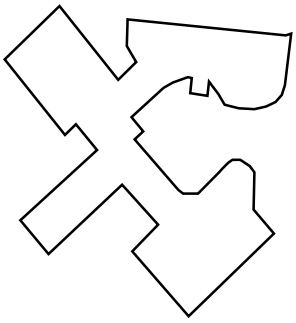
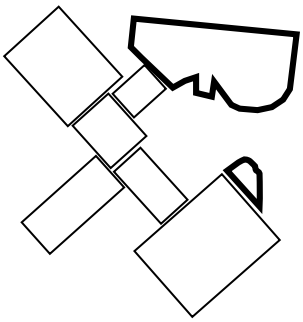
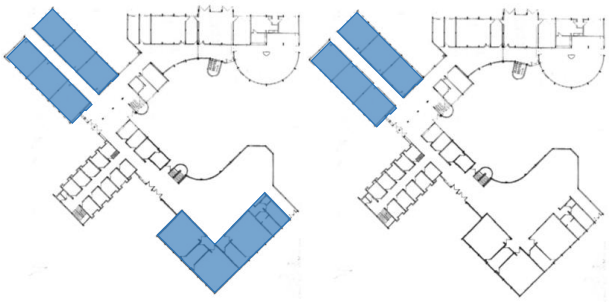
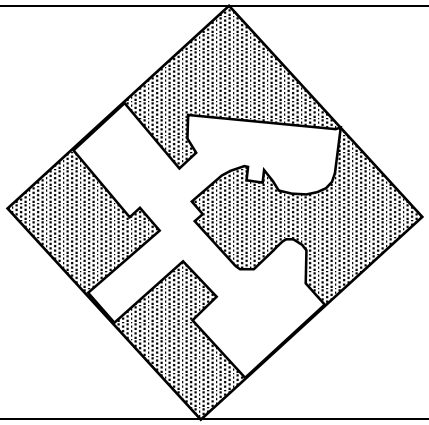
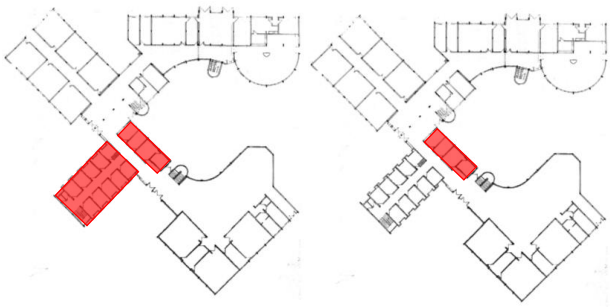
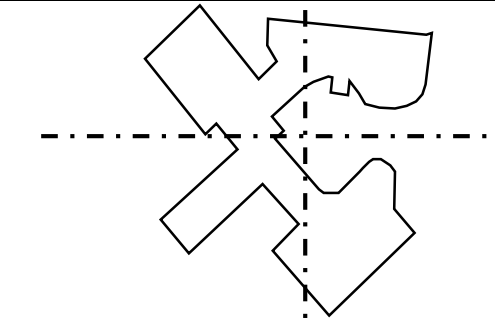
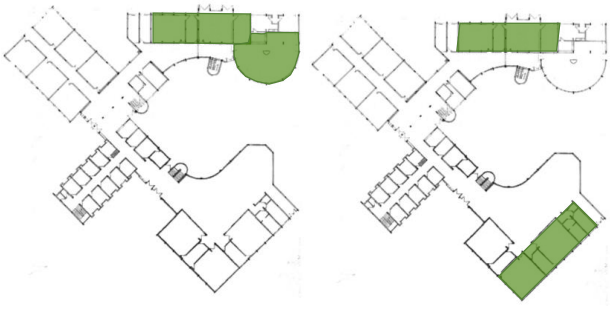
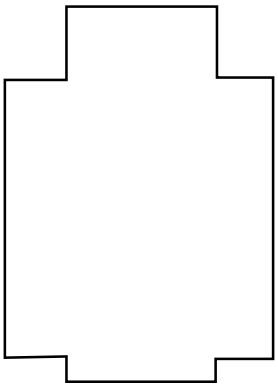
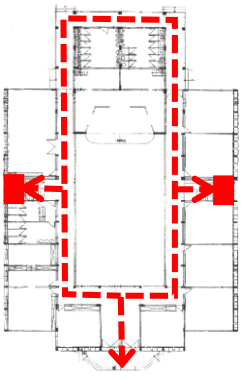
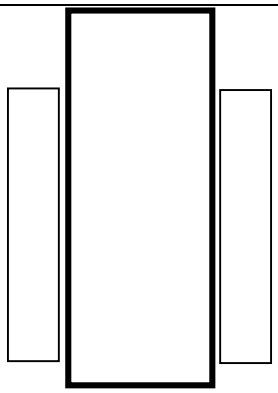
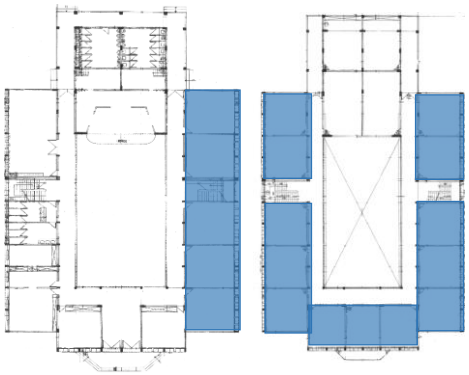
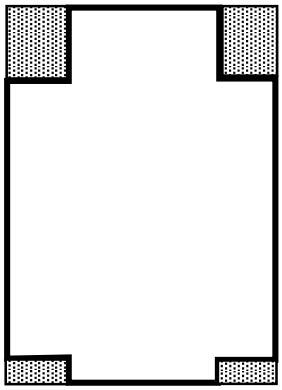
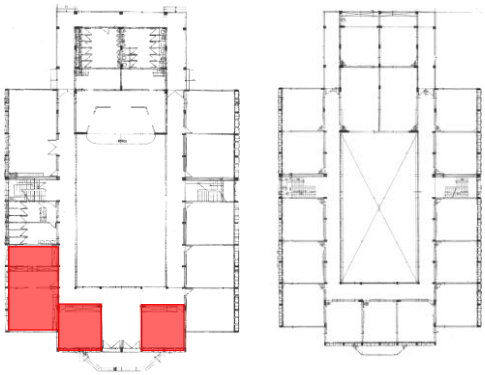
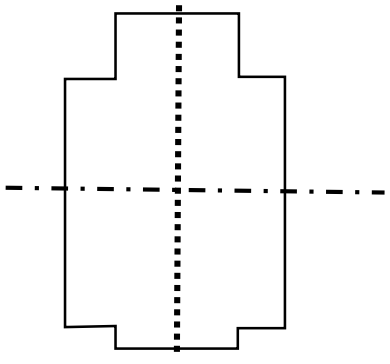
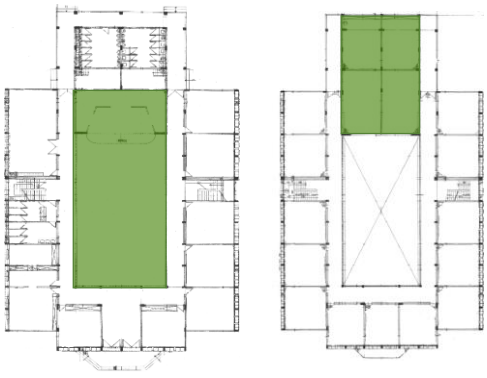
Layout type	Circulation
 Complex Block	 Vertical Circulation Horizontal Circulation
Repetitive to Unique	Classrooms Spaces
	
Additive Subtractive	Administrative Spaces
	
Symmetry and Balance	Shared Facilities
 Balance Symmetry	

Table 7.22 Formal and functional analysis: Oguz Veli Secondary School

Layout type	Circulation
 Single Block Type	 Vertical Circulation Horizontal Circulation
Repetitive to Unique	Classrooms Spaces
	
Additive Subtractive	Administrative Spaces
	
Symmetry and Balance	Shared Facilities
 Balance Symmetry	

The first glance of the school layout analysis reveals various implementations of designs over time. However, most school buildings are comprised of derivative use of rectangular layout. The findings indicate that the majority of schools have a semi-closed courtyard with a single block type[30] layout.

Variations of U-shaped layout have also been used in Turkish Cypriot schools, having different types of configurations. Gazi Elementary School (1926) is the first school building in U-shape. Its layout is one of the prototype Greek Cypriot school buildings, and therefore there are a large number of similar/exact Greek Cypriot schools in different parts of the island. However, Turkish Cypriots did not build another U-shaped school until 1999, the year that BTMK was built. The Turkish Boys' Lycee is the first school to have clustered blocks but in such a way that the arrangement of the blocks form a distorted U-shape with an open courtyard.

The diagrammatic analysis reveals a strong two-dimensional symmetry in the layouts of most school buildings. This two dimensional symmetry is also seen in the third dimension of the buildings. Even in the cases where the global layout does not reflect this symmetry, it is present in the local scale of the buildings, playing a pivotal role in the identification of Turkish Cypriot school generic.

The additive-subtractive analyses suggest that apart from modern period school buildings, each school had accentuated main entrances. The emphasized entrances are seen in most of the public and governmental buildings designed during British colonial

[30] A type characterised by compact volumes and simple internal layouts (Rigolon, 2010).

rule. This monumentality of entrance is usually supported with the symmetrical façade configuration. However in the modern period, this kind of monumentality shifted from such detailing to the overall massing of the building. Retrospectively, with the contemporary period, the emphasized entrances began to be employed once again in the design. This is achieved mainly by a projection of entrance lobby or an extended eave. In the larger subtracted areas, this typically forms a courtyard, which defines a gathering/assembly area and provides enhanced visual control.

According to the findings, the ‘‘unique’’ components of the layouts are parallel to the ‘‘additive’’ units, both belonging to the main entrances. The classroom blocks on the other hand, by their nature is a repeating function. This ‘‘repetitiveness’’ appears in the general layout too. This state becomes more evident with the increasing school size. In all of the school buildings studied, in a given school all the classroom layouts are in exact size and nature, therefore requiring equal number of openings. This generates a repetition on the façade where it endorses an identification of the building generic. One other commonality is the vertical circulations where the staircases protrude (additive) and become visible from the façade.

One notable transformation is seen in the circulation cores of the school buildings starting from the late 1930s school buildings. In the early British school buildings, mainly small and detached halls, where the rooms are connected, provided the circulation in a building. In later years this circulation is provided by large and continuous corridors having connection to multiple spaces.

The analyses indicate that in majority of school buildings, the administrative offices are located close by the entrance. In some cases, they are even the first space that one encounters walking into the building. This offers convenience for the teachers and headmasters as well as visitors but also an additional control of entry and exits.

In the beginning of the 20th century, shared facilities in schools were non-existent, the Victoria Girls School being the first school having workshop facilities such as weaving, as part of the curriculum. Nicosia Turkish Boys' Lycée is the first school to incorporate a space for performing arts into the school design. Following this, in most of the schools built during and after the 1950s, a theatre hall was included.

In a micro level, it is remarkable to witness the fact that throughout a century the classroom layouts have remained identical (Figure 7.4), although the size allocated per student has been doubled, from 0.93 m^2 (Sleight 1954, p. 19) in 1952-53 to 2 m^2 today[31]. The desks are usually for one or two pupils and there is a table for the teacher. The classroom furniture is rather limited. A typical classroom contains a small storage for books, hooks for hanging extra clothes, and a blackboard/whiteboard. The surrounding walls are utilized by pin boards filled with supplementary educational material or exhibition of student works.

[31] Required by the TRNC National Education Law (bylaws under Articles 53(2) and 70) for all new buildings of educational institutions.

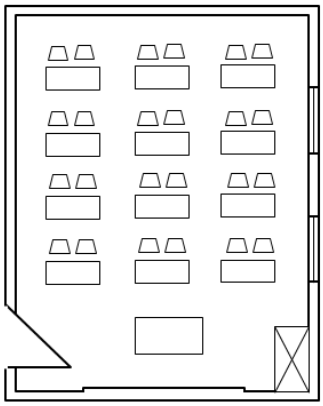


Figure 7.4. A typical classroom layout.

The classrooms are politicised from the early times by placing national and political figures on top of the blackboard facing the classroom. The lack of innovative design in classrooms can be attributed to an undue commitment to traditions. The apparent inflexible state of the contemporary education system and the school environment in north Cyprus, has an inherent reference to this traditionalism. As Jetsonen (2011, p. 72) rightly argues, this traditional classroom has an "authoritarian and didactic" setting where the students are seated in an ordered manner and the teacher is addressing them from the desk in front of the blackboard.

7.3 Justified Graph Analysis and Inequality Genotypes

Space syntax analysis has been introduced by Hillier and Hanson (1984) in their most influential and cited work *The Social Logic of Space*. The method aims to identify the topology of social connections, that is to say how individuals are organised in space. The method is widely used in the morphological analysis of buildings and urban regions.

The space syntax method can be used to analyse the circulation in a building and the accessibility of inhabitants to each other. It can also be used to obtain information

regarding who occupies positions of power. Space syntax methods are one of the most useful tools to analyse programmatic concerns of power in architecture (Dovey, 1999). The justified graph (or j-graph, for short) analysis is a basic tool for reading the spatial configuration while seeking hierarchical relations in a building. The method converts the building plan into a mathematical graph where the nodes are the spatial element and the links are the exact relations between them. With this method, one can determine the "depth" or "shallowness" between a point to another point in a particular building layout. In space syntax analysis, "distance" means "topological distance" and it is always referred to as "depth", which is measured in steps and denoted by D. Depth is an indication of power. The space at the deepest level of the graph represents the top hierarchy. What reveals the power relation is the amount of linearity or the "ringiness" in the structure of the diagram (Figure 7.5). The deeper the structure is, the amount of crossing through rooms increases (Dovey, 2008, p. 24). The generated graph presents a "direct insight into the sociological structure embedded within the plan, and, furthermore, that the graphs of building plans housing similar societies should bear some similarities with each other" (Bafna, 2001).

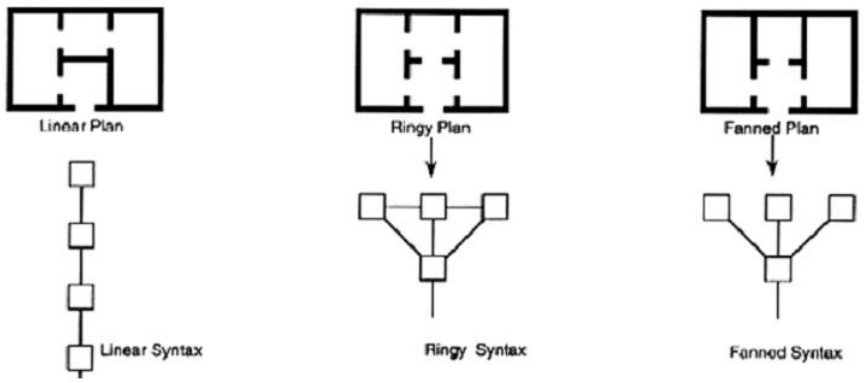


Figure 7.5. Primary syntactic relations: Linear, ringy, fanned (Source: Dovey 2008).

A central concept is "relative asymmetry" (RA) which compares the depth of the system from a specific point with the theoretically possible depth and shallowness.[32] Its value ranges between 0 and 1. Low values of RA indicate shallowness in the j-graph. Such spaces are characteristically dense in circulation, they tend to "integrate" the system. On the other hand, high values of RA indicate low integration (segregation). Real relative asymmetry (RRA) describes the degree of isolation or depth of a node not only in comparison to its own system or set, but also in comparison with a suitably scaled and idealised benchmark configuration (Ostwald, 2011). RRA values are particularly useful when comparing across systems of different sizes. In a way it is an empirical way of normalising the total depth. The reciprocal of RRA is known as the integration value and it is a measure of the degree of integration.

The differences of integration values for different spatial complexes are, according to Hillier, et al. (1987), the "keys to the way in which culture and social relations express themselves through space". To measure the way in which culture and social relations express themselves through different degrees of spatial integration, Hillier et al. (1987) have developed an entropy based *H**-factor which has values between 0 (maximum difference or minimum entropy), and 1 (minimum difference or maximum entropy) to express culturally significant typological differences.

The control value (CV) is a measure of the amount of control a space holds towards its direct neighbours in a system (Manum, 2005). A control value higher than 1

[32] A glossary of terms used and their mathematical formulas are given in Appendix A.

indicates a stronger control compared to the ones lower than 1, which have lesser control of space. A central difference between control value and integration is that, control value is a local measure whereas integration is a global measure because it considers the relation among every other space in the system (Hillier and Hanson 1984, p.109). The control values are found by letting each node give the total value of 1 equally distributed to its connected nodes. The control value of node *n*, CV(*n*), is the total value received by node *n* during this operation.

7.3.1 Justified Graph Analysis of the Selected School Buildings

The initial step for creating j-graphs is to convert the building layout into convex maps, which are the least (minimal) set of largest spaces that covers the system. After configuring graphs, the AGRAPH software is used to calculate TD (total depth), MD (mean depth), RA (relative asymmetry), *i* (integration value), and CV (control value). Based on these calculations, the social/spatial relations within the selected school buildings are analysed.

There are two ways of interpretation of justified graphs. The early analysis method was solely based on visual analysis of a given graph. Hanson (1998) in her influential work, *Decoding Homes and Houses,* used this method to mark the formation of social meaning in different domestic space, with the aid of visual analysis of justified graphs. The second method is the mathematical analysis of the graphs. This study applies both methods for analysis.

Table 7.23. Justified Graph Analysis of Turkish Cypriot School Buildings

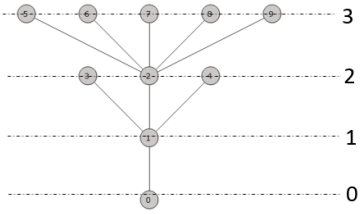
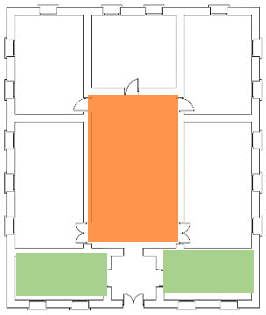
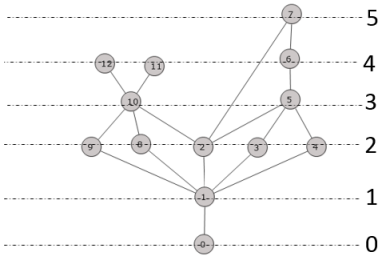
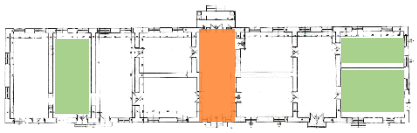
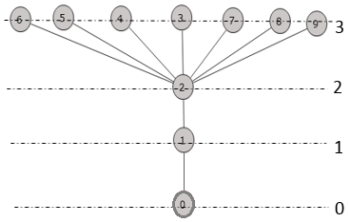
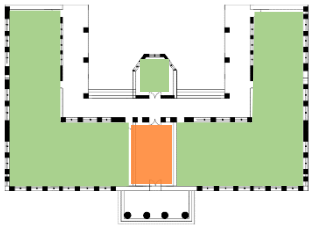
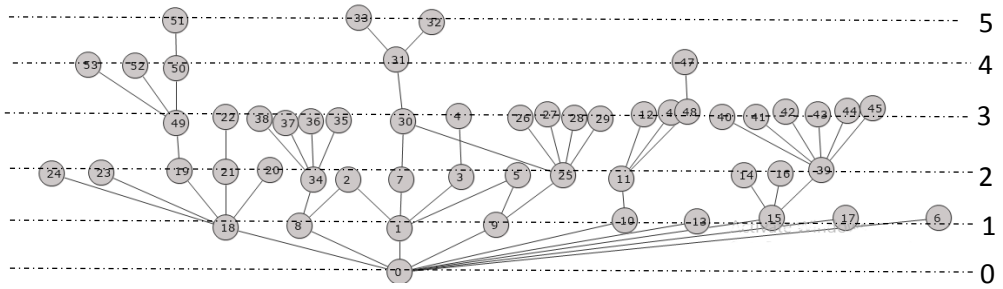
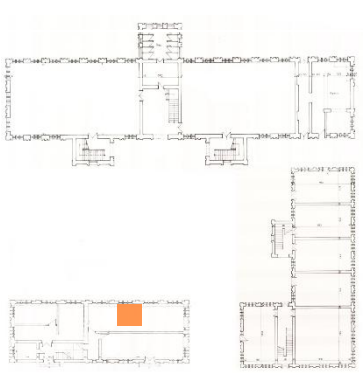
Idadi School, 1896	 TDn MD RA i Mean 19.20 2.13 0.28 4.38	 Least Integrated Most Integrated
Victoria Girls'School, 1902	 TDn MD RA i Mean 27.7 2.30 0.23 4.65	 Least Integrated Most Integrated
Gazi Elementary School, 1926	 TDn MD RA i Mean 17.6 1.95 0.23 7.15	 Least Integrated Most Integrated

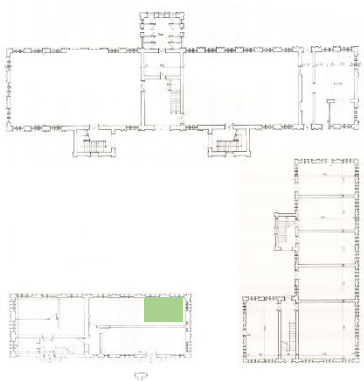
Table 7.23 Justified Graph Analysis of Turkish Cypriot School Buildings. Cont.

Turkish Boy's Lycée, 1929





Ground Floor

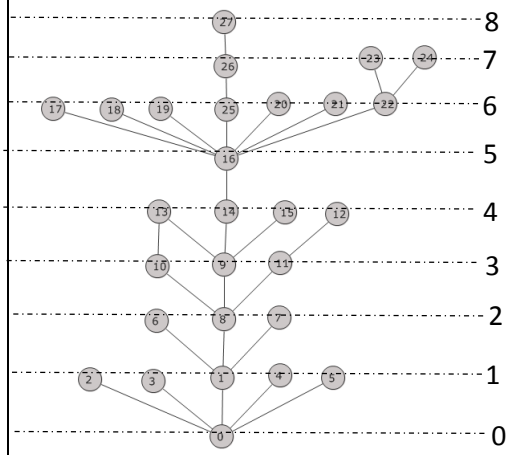


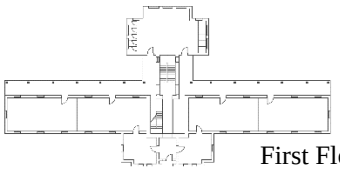
First Floor

	TDn	MDn	RA	i
Mean	242	4.56	0.13	7.82

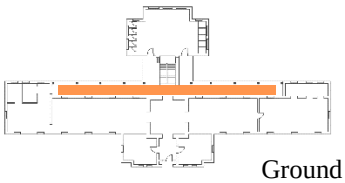
Least Integrated
Most Integrated

Teachers' Training College, 1936





First Floor



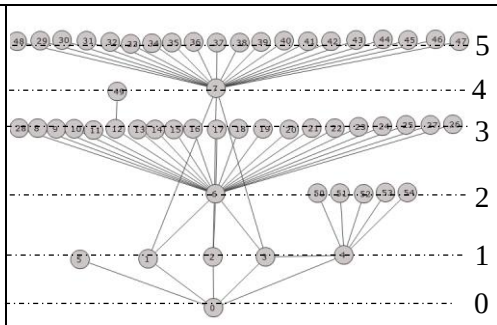
Ground Floor

	TDn	MDn	RA	i
Mean	113	4.21	0.24	4.28

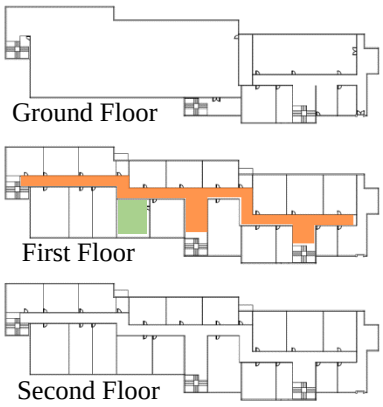
Least Integrated
Most Integrated

Table 7.23 Justified Graph Analysis of Turkish Cypriot School Buildings. Cont.

Atatürk Elementary School, 1957

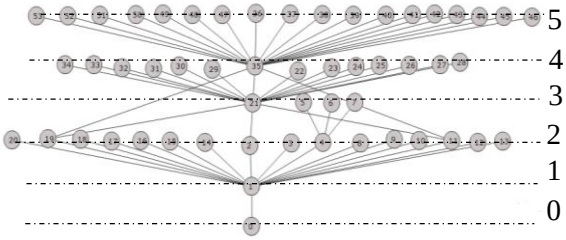


	TDn	MDn	RA	i
Mean	163	3.03	0.07	13.76

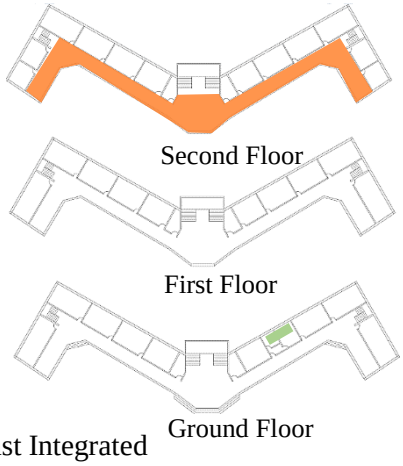


Least Integrated
Most Integrated

Namık Kemal Lycée, 1958

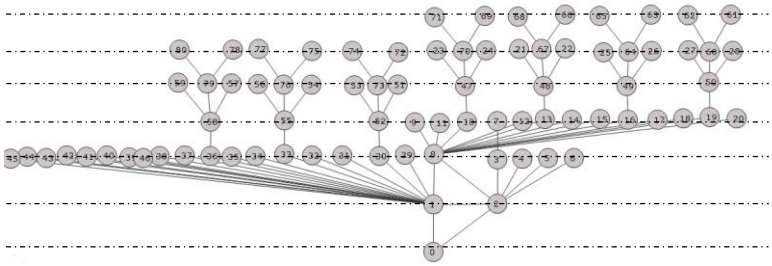


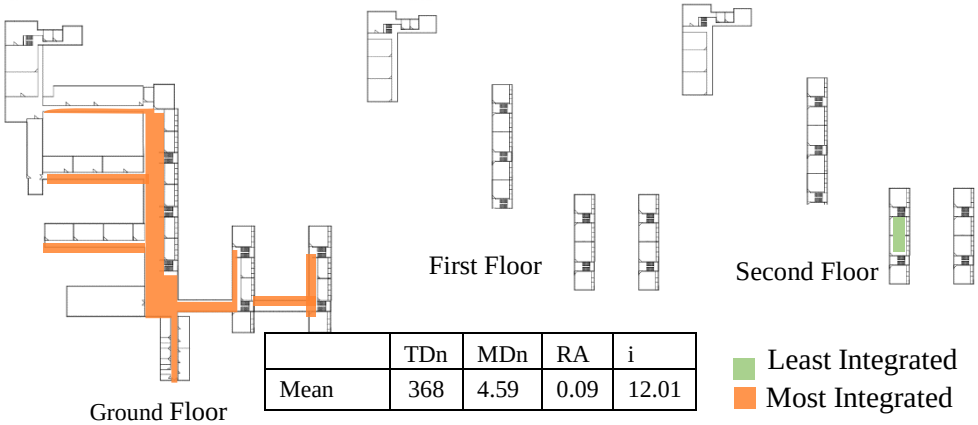
	TDn	MDn	RA	i
Mean	160	3.02	0.07	13.76



Least Integrated
Most Integrated

Nicosia Turkish Girls Lycée, 1958



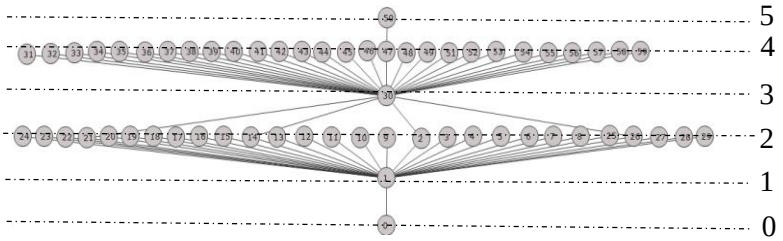


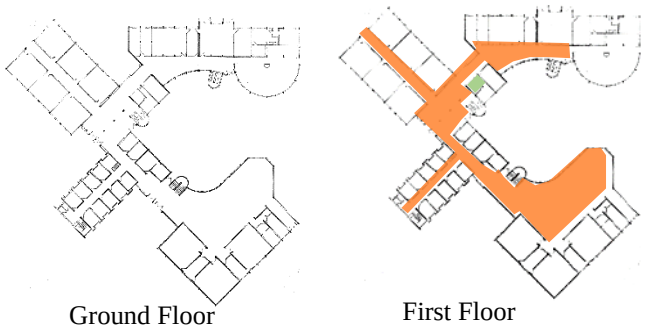
	TDn	MDn	RA	i
Mean	368	4.59	0.09	12.01

Least Integrated
Most Integrated

Table 7.23 Justified Graph Analysis of Turkish Cypriot School Buildings. Cont.

Atatürk Teacher Training Academy, 1998



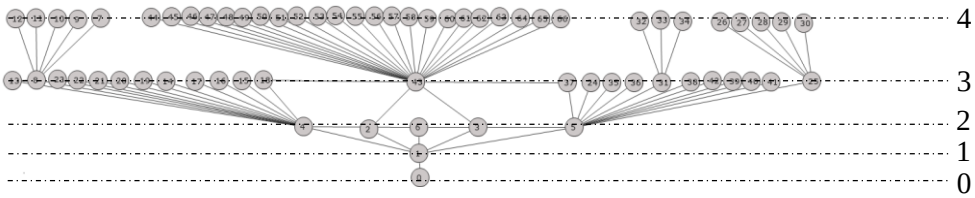


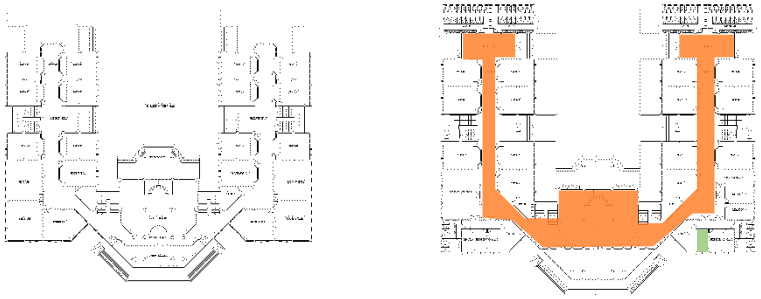
Ground Floor First Floor

	TDn	MDn	RA	i
Mean	103	2.85	0.1	9.92

Most Integrated
Least Integrated

Bayraktar Turkish Maarif College, 1999





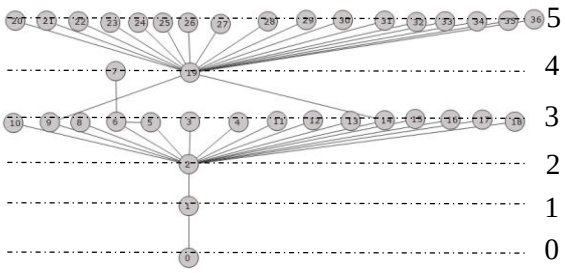
First Floor First Floor

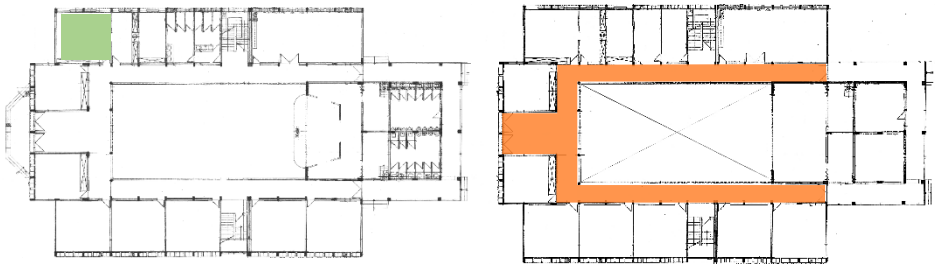
	TDn	MDn	RA	i
Mean	229	3.47	0.07	13.76

Least Integrated
Most Integrated

Table 7.23 Justified Graph Analysis of Turkish Cypriot School Buildings. Cont.

Oğuz Veli Secondary School, 2000





Ground Floor First Floor

	TDn	MDn	RA	i
Mean	105	2.90	0.1	9.68

Least Integrated
Most Integrated

The Idadi. The justified graph of the Idadi School demonstrates a tree like brunching structure, giving access to many segments after the second level, from a single segment of control. It forms a shallow structure with a total number of 3 levels. The highest RA value belongs to the Teachers' and Headmaster's room. Having connection to all spaces, the hall has the lowest RA value and the highest CV indicating a most integrated space of the building.

Victoria Girls' School. The Victoria Girls' School portrays a bush-like graph with increased permeability on the 2rd level, where the secluded courtyard is. The high number of entry possibilities to and from the courtyard creates a ringy structure. The graph deepens and the symmetric structure turns into asymmetric starting from the 3rd level. The findings indicate that due to the oddly organised circulation, the depth of the building increases considerably. The most integrated space in the system is the courtyard, where the circulation to the classrooms is generated largely from there. The highest RA values and the lowest integration values belong to the two classrooms on both far ends of the building, making them the least accessible, the most isolated parts of the school.

Gazi Elementary School. The visual analysis of Gazi Elementary School's justified graph forms a three-like structure with centralized control and circulation from a single segment on the 2nd level, where the distribution of classrooms and administrative spaces are laid. Although the layout of Gazi Elementary School is distinctly different from the Idadi School, their graph is quite identical. The reason for this similarity is the distribution and sequencing of their spaces in a similar manner. The circulation axis is the most integrated part of the system. Unlike the older schools, both the classrooms and headmaster's room bears the same level of integrity.

Turkish Boys' Lycée. The justified graph of Nicosia Turkish Boys' Lycée is a combination of three tree-like structures. The school consists of three blocks, and therefore their graphs are generated from the common courtyard to their main entrances. Thus, there are two 5-level and one 4-level of depth. The deepest nodes belong to the administrative units. Additional entrance gates increase the permeability of the library and the theatre hall, generating a ring. The student accommodation node has a very low integration value, and the porter's bedroom has the least value of integration, indicating potentially more private space. The small corridors on classroom block (A) and the small circulation areas of the administrative block (C) have the highest degree of control. The second least integrated space in the complex is the headmaster's office in block B. The canteen has one of the lowest values of RA, making it the most accessible and integrated space.

The Teachers' Training College. According to the findings, the Teachers' Training College at Morphou possesses the deepest graph amongst all school buildings studied, with a total 8 levels of depth. This signifies the highest hierarchical spatial organisation. Since the two classroom blocks are detached from the main building, they retain a very low integration value. The library is also very segregated due to its weak accessibility. One has to pass through a number of spaces in order to reach the library. The circulation on the ground floor of the main building is achieved in two possible ways. One can either use the semi-open corridor along the rectangular building, or pass through the linear arrangement of the entrance hall, the dining room, the common room, and the library. The deepest nodes are located after the 6^{th} level of the graph belong to the administrative accommodations. The two teachers' bedrooms are highly segregated and the headmaster's bedroom on the top floor has the highest value of segregation. The highest integration belongs to the circulation nodes and the hall. The

circulation node on students' accommodation area has the highest value of control, almost 5 times higher than the common room. The classrooms have very low integration values since their nodes do not have any other connection with the rest of the system. In this particular case, however, the less integration does not indicate a low accessibility.

Atatürk Elementary School. It is the first school to group classrooms under two main bushes. However, the 2nd floor classrooms are located at the 5th level due to the fact that there are no classrooms on the ground floor. The highest control value is obtained for the first floor circulation where both the teachers' room and the headmaster's room are located. Additionally the ring structure of the stairs provides an increased permeability to upper levels. The integrity of the theatre hall has a value below the building's average, even though it is located on the first level of the justified graph, making it more accessible to visitors but less permeable to users of the building.

Namık Kemal Lycée. The single circulation hall at each floor creates 3 individual bush-like structures at different levels. In total there are 5 levels of depth. Multi staircases increase the permeability where a ring is generated. Just like the Atatürk Elementary School, the teachers' room is at the same level of depth and integrity as the classrooms. Moreover, apart from the headmaster's office, all spaces including the library, the dormitory, and the laboratories are at the same level of integration and depth with the classrooms.

Nicosia Turkish Girls' Lycée. A wide spread irregular shape of the justified graph shows how the cluster type plan allows an integrated circulation to a larger space. Having the shared facilities on the ground floor increases the accessibility to these

spaces. Individual staircases result in small individual bushes, leading to a deepened graph. Furthermore, control values of the nodes of the multi-circulation halls are low because only two classroom nodes are connected to each circulation node. The theatre hall, which is also used by the public, has an above average integration value while at the same time having a shallow depth, making it both accessible to public and the inhabitants of the building.

Bayraktar Turkish Maarif College. The justified graph of the school is a bush-like symmetrical shallow structure with only 4 levels of depth. By connecting the upper floor circulation hall to the main entrance hall with four staircases, a ring which increases the permeability of nodes at different levels is formed. Just like the Namık Kemal Lycée and Atatürk Elementary School, the teachers' room is at the same level of depth and thus possesses equal value of integrity as the classrooms. Compared to the ground floor circulation, which is divided into a number of segments, the upper-floor single circulation node is more integrated, implying a denser traffic.

Atatürk Teachers Training Academy. The building has a shallow, bush like j-graph structure with 5 levels of depth. Although the building stands out from other schools as having a different layout, the spatial properties reveal visually similar bush-shaped graph of modern period school buildings like Namık Kemal Lycée and Oğuz Veli Secondary School. The foremost character of this building among the buildings analysed is that the 56% of the total nodes in the building have connections to the most integrated space, the first floor circulation hall.

Oğuz Veli Secondary School. The justified graph of Oğuz Veli Secondary School is a symmetrical structure with 5 levels of depth. Like Bayraktar and Namık Kemal Lycée,

the circulation nodes are the most integrated spaces as access to each space on each floor is generated from a single node. There is no hierarchy in integration, each function having similar/equal integrity. The theatre hall, located at the heart of the building, is not as integrated as one expects because there is only a single access point.

This less hierarchical arrangement of classrooms and administrative units, which began with the Atatürk Elementary School in the late 1950s, recurred in all school buildings built afterwards with the exception of the Turkish Girls Lycée. It is also noted that although the number of spaces in school buildings increased over time, the depth of general configurations of the schools has remained at an average of 5 levels of depth. As an outcome of this single shared circulation, the control values of these nodes have increased. This is seen where the larger number of spaces are connected to a single node. This setting enables the control of human activities in a building.

7.3.2 Inequality Genotype Analysis of Selected School Buildings

The second most widespread method of space syntax is the "inequality genotype" which, according to Hillier et al. (1987), is fundamental in understanding the social and cultural interactions which communicate through space. Different spatial organisations in buildings with the same functions have different integration values, which find an expression in justified graphs. A workable definition of inequality genotype is given by Bafna (2001) as "the ranking of programmatic labelled spaces according to their mean depth (most often described in terms of integration values) of the nodes in the graph of the spatial configuration to which they correspond". If a pattern emerges between the integration values of different functions among the schools, then it is possible to speak of a culture embedded in spatial layout. The inequality genotypes of the examined school buildings are given in the Table 7.24.

Table 7.24. Inequality genotype of spaces in Turkish Cypriot school building

Idadi Boys School	AD(2.76) < C(3.27) < H(12)
Victoria Girls School	C(3.86) < AD(4.71) = AS(4.71) < H(7.33)
Gazi Elementary	C(4) = AD(4) <AS (5.14) <H (36)
Turkish Boy's Lycee	AD(4.56) < B(5.46) < AW(5.88) < SW(6.26) <AS(6.82) < H(8.72) = L(8.72) = T(8.72) < CA(9.09) < C(10.13)
Teachers Training College	C(3.16) < L(3.34) < AS(3.77)= AD(3.77) < B(4.22) < T(4.44) = CA(4.44) < AW(4.55)= SW (4.55) < H(6.38)
Namık Kemal Lycee	AS(8.35) = AD(8.35) < C(12.5) < L(12.75) < B(13.25) < H(23.89)
Atatürk Elementary	AD(8.94) < CA(9.86) < T (10) <AS(12.66) = C (12.66) = L (12.66) = AW (12.66) < SW (13.03) < H (25.55)
Turkish Girls' Lycée	C(7.45)<AD(9.87)<AW(13)<AS(13.11)<SW(14.83)<L(14.9)= T(14.9) < H(23.75)
Teachers Training College	L(3.43)=T(3.43)<AW(9.83)=AD(9.83)=AS(9.83)<SW(12.84)< <C(14)<H(22.34)
BTMK	AD(10.3)<C(14.5)=CA(14.5)<AS(15.6)=AD(15.6)=SW(15.6)=AW(15.6)=L(15.6)<H(32.9)
Oğuz Veli Secondary School	AW(8.1)<SW(8.87)< T(8.87) <C(8.87) < AD(9) < AS(9.13) < L(9.13) < H(18.1)

AD: Headmasters office, AS: Teachers' Room, AW: Admin WC, SW: Student WC, B: Dormitory, H: Hall, C: Class, T: Theatre, CA: Canteen, L: Library

The findings suggest that there is a shared pattern of ordering of spaces in Turkish Cypriot school buildings. In Table 7.24, the ranking of integration values from highest to lowest reveals certain spatial commonalities among the selected school buildings.

In most of the cases, the administrative body of the buildings appears to be the least integrated space, as spaces having more hierarchical importance are associated by least integration values. In the early British colonial period schools, classrooms turn out to be the second least integrated space. However, starting with the modern schools of the 1950s, classrooms appear to be more integrated and this trend increased in the contemporary school buildings. In almost all schools the most integrated spaces belong to shared facilities and circulation units.

Table 7.25. H*-Value Analysis of Turkish Cypriot School Buildings

School Name	**H***
Idadi Boys School	0.65
Victoria Girls School	0.82
Gazi Elementary	0.19
Turkish Boys Lycee	0.68
Teachers Training College	0.63
Atatürk Elementary School	0.71
Turkish Girls Lycée	0.76
Namık Kemal Lycée	0.71
BTMK	0.84
Atatürk Teachers Training Academy	0.78
Oguz Veli Secondary School	0.76

Considering the relative difference factors of the studied school buildings, H* value is used where it is calculated as the degree of differentiation amongst spaces with regards to the integration values within a sample, as presented in Table 7.24. When the entropy values are analysed, 0.71 is obtained as the mean value of H*. In other words the school buildings analysed show weak genotype relationship. Both Idadi and the Gazi elementary school buildings remain below the average. The strongest genotype

belongs to Gazi, which has 73% less entropy value when compared with the average. The Atatürk Elementary School and Namık Kemal Lycée show exactly the same H* value of 0.71. The school buildings built afterwards have greater H* values, indicating a relatively weaker genotype relationships. H* value for BTMK, however, is 0.84 which is 18% more than the average.

Chapter 8

CONCLUSIONS

This thesis has employed multiple research methods to study Turkish Cypriot school architecture from 1878 until 2000s. The study incorporated the effects of social political changes; the colonisation and decolonisation of education and architecture; the role of nationalism, and the reflection of all these on the architectural formation of school buildings in the selected time frame. The significance of the thesis lies not only being the first integrated study in this particular domain but also in the methods developed and employed.

During the 82-year British colonial period Turkish Cypriot education and identity of school buildings have been swayed through social and political dynamism, leaving behind visible reminders of evolution of school environment. The schools have been evolved from simple classrooms into schools fully equipped with modern educational facilities. One of the first constructive intervention of the British colonial administration was the establishment of the Public Works Department, which took the responsibility of design and construction of all public buildings in Cyprus. The British engineering and construction expertise, facilitated highly functional school designs with subtle aesthetics, incorporating elements of Ottoman and Greek local vernacular architecture.

In the early British period, the vague stand of the colonial rule towards education and school buildings did not only found a reflection on stylistic approaches but also in spatial distributions as revealed by the spatial analysis presented. Although for this period, the justified graphs of schools differ, they all have a common hierarchic spatial distribution with regards to student – administrative spaces.

There are several factors which have influenced the evolutionary process of schools in Cyprus. Two main factors are the social and cultural changes in the Turkish Cypriot community. In the early British colonial period the school buildings (e.g. the Idadi and Victoria) represent the conservative culture of Turkish Cypriots. Although the buildings were built by the British colonial administration, the introvert layouts and secluded courtyards disclose the disposition of the community. The functional analyses of schoolyards carried out in this study demonstrates that the closed, introvert assembly areas of the early period, become extrovert with the modernised school environments, exhibiting the assembly areas visible to the public.

Ethnic nationalism, on the other hand, played a significant role in the history of Cyprus. The seeds of ethnic nationalism were planted in schools as a part of education. Symbolic references to national identity in schools have complemented ethnic national aspirations of both students and the community as a whole. This is expressed in the form of excessive use of portraits of political figures, flags, national ceremonies, performing arts, etc. The schoolyard properties analyses (studied in chapter 7) display, and oral history (in chapters 3-6) verifies the above statements.

With the exception of coercive practices in 1930s and 1940s, the political manipulations of British colonial administration on school architecture have been

negligible. The research carried out in this thesis demonstrates that the most prominent manifestation of political interference in the architecture of schools and other public buildings in Cyprus took place in the two decades following the 1931 revolt. The subsequent British policy of *Cypriotism*, strictly denied both Greek and Turkish origins of Cypriot people, fabricated a "Cypriot" identity based on certain archaeological findings. The new policy of the colonial rule was reflected in architecture as a *mélange* style which included all of the past architectural styles in Cyprus but carefully omitting anything Hellenic. The imposition of Cypriot identity, however, did not work. On the contrary, it aggravated both Greek and Turkish ethnic nationalism. The formal, functional and spatial analysis reveals that, the Teachers Training College in Morphou, the only example from this period in north Cyprus, stands out from the rest of schools, making it unique and unprecedented.

The Kemalist revolutions which transformed Turkey into a westernised state had resonated in the Turkish Cypriot community, intensely inspiring ethnic nationalism in 1920s. Turkish Cypriots' search for identity and enlightenment thus found a source; schools being the springs of Kemalist modernist ideology. The research undertaken in this thesis shows that the reflection of this in architectural expression, however, took further two decades.[33] The oppressive British colonial attitude following the 1931 revolt and the hardship years of World War II had, no doubt, been responsible for this delay. During the 1950s the rising ethnic nationalism among the Turkish Cypriots found a voice in architectural modernism. The research carried out in this thesis finds

[33] As late as 1926, when the Evkaf-financed Gazi Elementary School was built in Greek revival style, no objection was raised by the Turkish Cypriot community.

a striking parallelism between the Turkish Cypriot school architecture of 1950s and the modernist school architecture in Turkey in 1930s to 1950s.

During the last decade of British rule, Turkish Cypriots clanged on modernism as the sole representation for a national identity and ideology both in educational matters and its built environment. The general western influence paved by the British, together with the driving stimulus of Atatürk's western vision, formed a strong basis for a secular educational atmosphere. Financial support together with technical and architectural expertise from Turkey, ignited the decolonization process even before the British left the Island in 1960. With the arrival of first Turkish Cypriot architects educated mostly at Istanbul Technical University, a new scenery of modern buildings began to dominate the urban image. Determined use of reinforced concrete replaced the yellow sandstone. This paved the way for experimenting of different architectural forms and the construction of larger schools.

The present study reveals that there was a marked increase of importance attached to status of women in the society starting with early 1950s. For many years there was only one girls school above the elementary level, and moreover, its curriculum was not comparable with that of Boys Lycée. It must, however, be noted that girls were not encouraged to get higher education, their assigned role in the society was to be good housewives, and elementary education was sufficient for this role. This situation has changed remarkably towards the late 1950s. Towards the end of the British rule, and also during the early years of the Republic, the two major ethnic communities had opposing attitudes towards modernity. This contrasting stance was most evident in public school architecture. While the Greek Cypriots took a position esteeming the "tradition" and continued to build their schools in Greek revival style, the Turkish

Cypriots saw in the “modern” a liberating channel which helped the construction of a national identity parallel to Atatürk’s Turkey, and built their schools in the modern style.

Both formal and spatial analyses carried out in the study revealed a marked change in the distribution of space through the history of school buildings. Although it is only natural for different spatial qualities to develop in the course of time, the results indicate that the modern Turkish Cypriot school buildings reorganised the functional distribution of school environments by changing the circulation pattern. In the new organisation, schools became larger due to the increased student population as well as the improved construction techniques, corridors became the spine of the building, providing a continuous circulation. Both Foucault (1977) and Markus (1993) associate corridors with an architectural disciplinary mechanism, as they increase the control and surveillance in a building. The spatial analysis carried out in this thesis on selected school buildings supports this assertion. The outcome of the syntactic data shows an increase in control values of school buildings which provide circulation through corridors.

The formal and functional analyses demonstrated some commonalities among all the cases studied. The most common feature is the strong axial symmetry in the form. This symmetric form is supported with an emphasised centrality at the geometric centre of the school buildings studied. Such a symmetry and centrality is a common feature of British colonial governmental buildings and this similarity enabled old school buildings to be used now as governmental offices. Today most of such schools are transformed into government and ministry buildings. Today, most of the early British colonial schools do not serve for their initial purpose.

With the growing number of Turkish Cypriot architects, decolonised school environments have emerged. Moreover a more homogeneous school identity is formed. The schools left behind by the Greek Cypriots after the separation was instrumental in the experiencing and spreading the use of semi-open circulation units in the Turkish Cypriot built annexes. The wide use of such annexes have contributed in the identification of Turkish Cypriot school environments.

The Turkish Cypriot schools built in the 21st century do not, however, fully utilise the available advanced construction technologies, global networks of information, and the development in educational sciences. Schools of today are veiled replicas of governmental buildings, creating a uniformity and identity of public institutions. This state, however, does not support innovative environment, an essential ingredient of contemporary educational philosophy.

REFERENCES

Adas, M. (1989). Machines as the Measure of Men: Science, Technology, and Ideologies of Western Dominance. Ithaca, New York: Cornell University Press.

Anderson, B. (2006). *Imagined Communities. Reflections on the Origin and Spread of Nationalism.* Revised edition. London: Verso.

Asmussen, J. (2006). Introduction to Disturbances in Cyprus in October, 1931. *Journal of Cypriot Studies*, Vol. 12, No. 30, pp. 1-3.

Atiya, A. S. (1962). *Crusade, Commerce and Culture*. Bloomington: Indiana University Press.

Atun, H. M. (1971). Osmanlı mimarisinin Kıbrıs'taki tesirleri. In: *Milletlerarası Birinci Kıbrıs Tetkikleri Kongresi, Lefkoşa, 14-19 Nisan 1969, Türk Heyeti Tebliğleri*, Ankara: Türk Kültürünü Araştırma Enstitüsü Yayınları, no. 36.

Atun, H. (1994). 50. Yılında Namık Kemal Lisesi. In: Yorgancıoğlu, O. (ed). *Kıbrıs Türk Eğitiminde 50. Hizmet Yılı 1944 - 1994*. Famagusta, Cyprus: Temel Basımevi.

Bafna, S. (2003) Space syntax – A brief introduction to its logic and analytical techniques. Environment and Behaviour, Vol. 35, No. 1, 17-29.

Barthes, R. (1967). *Elements of Semiology*. London: Jonathan Cape.

Barthes, R. (1973). *Mythologies*. London: Paladin.

Behçet, H. (1969). Kıbrıs Türk Maarif Tarihi (1571 - 1968). Nicosia, Cyprus.

Benito, A. E. (2003). The school in the city: School architecture as discourse and as text. *Paedagogica Historica*, Vol. 39, No. 1/2, 53-64.

Bilgi, S. (2014). Monuments to the Republic: School as a nationalising discourse in Turkey, *Paedagogica Historica*, Vol. 50, No. 3, 356-370.

Bilsel, N.and Dinçyürek, Ö. (2014). Mediating power in British colonial architecture: Post-1931 Cyprus. *IASTE Working Paper Series*, Vol. 256, 47-58.

Bilsel, N.and Dinçyürek, Ö. (2017). Education under the shadow of politics: school buildings in Cyprus during the British colonial period. *Paedagogica Historica*, Vol. 53, No. 4, 394-410.

Bouleti, E. (2011). The Muslim community on Cyprus and British colonial policy, 1878 – 1915: The significance of the Cyprus Evkaf in the colonisation process. *The Cyprus Review*, Vol. 23, No. 2, 39-56.

Bourdieu, P. (1977) *Outline of a Theory of Practice.* Cambridge: Cambridge University Press.

Bourdieu, P. (1990) *The Logic of Practice*. Cambridge: Polity Press.

Bozdoğan, S. (2001). Modernism and Nation Building. Turkish Architectural Culture in the Early Republic. Seattle: University of Washington Press.

Bryant, R. (2004). Imagining the Modern. The Cultures of Nationalism in Cyprus. London: I. B. Tauris.

Burke, C. and Grosvenor, I. (2008). School. London: Reaktion Books.

Çağlayan, P. (2014). Kıbrıslı Olamamak: Kıbrıs'taki Milliyetçiliklerin İdeolojik Kökenleri Üzerine bir Analiz. Ankara: Ankara Üniversitesi Yayınları.

Calhoun, C. (1997). Nationalism. Minneapolis: University of Minnesota Press.

Clark, R.H., Pause, M. (2005). Precedents in Architecture. Analytic Diagrams, Formative Ideas, and Partis. 3rd edition. New Jersey: John Wiley & Sons, Inc.

Clark, P., Varnava, A. (2013) Accounting in Cyprus during the last four decades of British rule: Post-World War I to independence (1918 – 1960). Accounting History, Vol. 18, No. 3, 293-315.

Cobham, C. D. (1908). Excerpta Cypria: Materials for a History of Cyprus. Cambridge: Cambridge University Press.

Crinson, M. (2003). Modern Architecture and the End of Empire. Aldershot, Hants: Ashgate.

Dedeçay, S. (1985). Viktorya İslam İnas Sanayi Mektebi ve Kıbrıslı Türk Kadının Hakları (1902-1985). Nicosia: Özel Türk Üniversitesi Yayınları,

Dedeçay, S. (2008). Kıbrıslı Türk Kadınının Eğitim Aracılığı Sayesinde Dinsel Mutassıplıktan Sıyrılıp Çağdaş Hakve Özgürlük Kurallarını Kabullenişi. Vol 1. Nicosia: Özel Türk Üniversitesi Yayınları.

Demetriades, F.C. (1985). A study of teacher education, training and development in Cyprus. PhD dissertation, University of Durham.

Demetriou, C. (2008) Big structures, social boundaries, and identity in Cyprus, 1400 – 1700. American Behavioral Scientist, Vol. 51, No. 10, 1477-1497.

Department of Education (1933). Report of the Department of Education for the School Years 1930-31 and 1931-32. Nicosia, Cyprus: Government Printing Office.

Dovey, K. (2008) Framing Places. Mediating Power in Built Form. Second edition. London: Routledge.

Dovey, K. (2010) Becoming Places. Urbanism/Architecture/Identity/Power. London: Routledge.

Edbury, P. W. (1991). The Kingdom of Cyprus and the Crusaders 1191 – 1374. Cambridge: Cambridge University Press.

Enlart, C. (1987). Gothic Art and the Renaissance in Cyprus. London: Trigraph (Translation of L'Art Gothique en Chypre, Paris: Ernest Leroux, 1899).

Ergin, M. (2009). Cultural encounters in the social sciences and humanities: western émigré scholars in Turkey, History of the Human Sciences, Vol. 22, no. 1, 105-130.

Ergut, E. A. (1999). The forming of the national in architecture. METU JFA, Vol. 19, Nos. 1-2, 31-43.

Fereos, S., Phokaides, P. (2006) Architecture in Cyprus between the 1930s and 1970s. Docomomo Journal, No. 35, pp. 15-19.

Feridun, H. (2011). Kıbrıs Türk Eğitim Tarihinden Bir Ömür [A Life from the History of Turkish Cypriot Education]. Nicosia: Galeri Kültür Publications.

Feridun, O. (2015). Zamanı Tiye Aldım. Hayatımdaki Kıbrıs ve Bir Hukukçunun Serüveni. Nicosia: Galeri Kültür Publications.

Findlay, L. (2005). Building Change – Architecture, Politics and Cultural Agency. Milton Park, Abingdon: Routledge.

Fisher, K. D. (2006) Messages in stone: Constructing socio-political inequality in late Bronze Age Cyprus. In E. C. Robertson, J. D. Seibert, D. C. Fernandez, and M. U. Zender (eds.): Space and Spatial Analysis in Archaeology. Calgary, Alberta: University of Calgary Press.

Foucault, M. (1977) Discipline and Punish: The Birth of the Prison. New York: Vintage.

Foucault, M. (2000) Power. Essential Works of Foucault 1954-1984, volume 3. London: Penguin Books.

Fortna, B. C. (2002). Imperial Classroom, Islam, the State, and Education in the Late Ottoman Empire. Oxford: Oxford University Press.

Gaventa, J. (2003). Power after Lukes: a review of the literature. Brighton: Institute of Development Studies.

Gellner, E. (1983). Nations and Nationalism. Oxford: Basil Blackwell.

Georghiou, C. (2013) British Colonial Architecture in Cyprus. The Architecture of the British Colonial Administration. Nicosia: En Tipis.

Given, M. (1997) Star of the Parthenon, Cyprus mélange: Education and representation in colonial Cyprus. Journal of Mediterranean Studies, Vol. 7, No. 1, pp. 59-82.

Given, M. (1998). Inventing the Eteocypriots: Imperialist archaeology and the manipulation of ethnic identity". Journal of Mediterranean Archaeology, Vol. 11, No. 1, pp. 3-29.

Given, M. (2005). Architectural styles and ethnic identity in medieval to modern Cyprus. In J. Clarke (ed.): Archaeological transmission and transformation of culture in the Eastern Mediterranean, Ch. 25, pp. 207-213. Oxford: Oxbow Books.

Gjerstad, E., Lindors, J., Sjöqvist, E., and Westholm, A. (1934-37). Finds and Results of the Excavations in Cyprus 1927-1931. 3 volumes. Stockholm: The Swedish Cyprus Expedition.

Goodman, N. and Elgin, C. Z. (1998). Reconceptions in Philosophy and other Arts and Sciences. Indianapolis: Hackett Publishing Company, Inc.

Gürdallı, H. and Koldaş, U. (2015). Architecture of power and urban space in a divided city: A history of official buildings in Nicosia/Lefkoşa. The Design Journal, Vol. 18, No. 1, pp. 135-158.

Gutting, G. (2005) Foucault. A Very Short Introduction. Oxford: Oxford University Press.

Hamilton, D. (2015). The beginning of schooling - as we know it?. Journal of Curriculum Studies, vol. 47, no. 5, pp. 577-593.

Hamilton, D., and Zufiaurre, B. (2013). Blackboards and Bootstraps: Revisioning Education and Schooling. Rotterdam: Sense Publishers.

Hill, G.F. (1940) A History of Cyprus. 4 volumes. Cambridge: Cambridge University Press.

Hillier, B. and Hanson, J (1984). The Social Logic of Space. Cambridge: Cambridge University Press.

Hillier, B., Hanson, J., and Graham. H (1987). "Ideas are in things: an application of the space syntax method to discovering house genotypes." Environment and Planning B: Planning and Design, Vol. 14, pp. 363-385.

Hobsbawm, E. J. (1992). Nations and Nationalism since 1870. Programme, Myth, Reality. 2nd edition. Cambridge: Cambridge University Press.

Holland, R. F. (1998) Britain and the Revolt in Cyprus, 1954-1959. Oxford: Clarendon Press.

Hook, G. R. (2009) Britons in Cyprus, 1878 – 1914. PhD Thesis, University of Texas at Austin.

Horvath, R. J. (1972) A definition of colonialism. Current Anthropology, Vol. 13, No. 1, 45-57.

Hosagrahar, J. (2005). Indigenous Modernities. Negotiating Architecture and Urbanism. Milton Park, Abington: Routledge.

Hutchinson, J.T., and Cobham, C.D. (1907). A Handbook of Cyprus. London: Edward Stanford.

Jacoby, D. (1989). The rise of new emporium in the eastern Mediterranean: Famagusta in the late thirteenth century. In D. Jacoby: Studies on the Crusader States and on Venetian Expansion. Northampton: Variorum Reprints.

Jeffrey, G. (1918) A Description of the Historic Monuments of Cyprus. Studies in the Archæology and Architecture of the Island. Nicosia: The Government Printing Office.

Jetsonen, S. (2011). "Setting the scene for learning". In: Kasvio, M. (ed.), The Best School in the World. Helsinki: Museum of Finnish Architecture. pp. 72-73.

Kedouri, E. (1961). Nationalism. London: Hutchinson.

Kıbrıs Türk Federe Devleti Yasaları (1979). Birinci Beş Yıllık Kalkınma Planı (1978-1982) Yasası. Lefkoşa.

Kiessel, M., Tozan A. (2011) The Passenger Steamer and Cypriot Modernism, 1930-1970. Prostor 19[2011] 1[41], pp. 214-227.

King, A.D. (1984) The Bungalow. The production of a global culture. Ch.1. London: Routledge & Kegan Paul.

Kıprıs Erkek Lisesi Mecmuası 1933-1934 Yıllığı (1934) [Cyprus Boys Lycée 1933-1934 Yearbook]. Nicosia, Cyprus: Birlik Matbaası, pp. 38-68.

Kızılyürek, N. (2002). Milliyetçilik Kıskacında Kıbrıs. İstanbul: İletişim Yayınları.

Kusno, A. (2012). Rethinking the nation. In C.G. Crysler, S. Cairns, and H. Heynen (eds.): The SAGE Handbook of Architectural Theory. London: SAGE Publications, pp. 213-230.

Lang, M. (2012) Education in Ethnic Violence. Identity, Educational Bubbles, and Resource Mobilization. Cambridge: Cambridge University Press.

Lefebvre, H. (1991) The Production of Space. Oxford: Blackwell.

Loomba, A. (2005). Colonialism/Postcolonialism. Second edition. London: Routledge.

Lu, D. (2012). "Entangled modernities in architecture" . In C.G. Crysler, S. Cairns, and H. Heynen (eds.) The SAGE Handbook of Architectural Theory. London: SAGE Publications, pp. 231-246.

Luke, H. C. (1921). Cyprus Under the Turks 1571 – 1878. London: Oxford University Press.

Manum, B. (2005). Generality versus specificity; a study on the interior space of apartments. Proceedings of 5th International Space Syntax Symposium. Delft. Vol. II, 3-13.

Markus, T. A.. (1993) Buildings and Power: Freedom and Control in the Origin of Modern Building Types. London: Routledge.

Markus, T.A., Cameron, D. (2002) The Words Between the Spaces. Buildings and Language. London: Routledge.

Metcalf, T.R. (1984) Architecture and the Representation of Empire: India, 1860-1910. Representations, No. 6, 37-65.

Miili Eğitim Bakanlığı (1986). Kuzey Kıbrıs Türk Cumhuriyeti Milli Eğitim Yasası. No. 17/1986. Availabe at www.mebnet.net.

Morgan, T. (1998). Literate Education in Hellenistic and Roman Worlds. Cambridge: Cambridge University Press.

Morgan, T. (2010). Sweet and Bitter Island. A History of the British in Cyprus. London: I. B. Tauris & Co. Ltd.

Nevzat, A. (2005) Nationalism Amongst the Turks of Cyprus: The First Wave, Oulu: Oulu University Press, 2005.

Nevzat, A., Hatay, M. (2009). Politics, Society and the Decline of Islam in Cyprus: From the Ottoman Era to the Twenty-First Century. Middle Eastern Studies, Vol. 45, No. 6, pp. 911-933

Numan, I., Pulhan, H., Dinçyürek, Ö. (2001) Culture as a determinant of identity of the two walled cities of Cyprus. In: Post Proceedings World Conference on Cultural Design, World Congress on Environmental Design for the New Millennium 9-21 Nov 2000, Seoul, Yonsei University Press, pp. 489-502.

Orme, N. (2006). Medieval Schools from Roman Britain to Renaissance England. London: Yale University Press.

Orwell, G. (1968). Politics and the English Language. In The Collected Essays, Journalism and Letters of George Orwell, Volume IV, In Front of Your Nose 1945 -1950. London: Secker & Warburg.

Özay, N. (2004) PhD Thesis, Eastern Mediterranean University, Famagusta.

Özgüven, B. (2004) From the Ottoman province to the colony: Late Ottoman educational buildings in Nicosia. METU JFA 2004/1-2 (21), pp. 33-66.

Pantelić, B. (1997) Nationalism and architecture: The creation of a national style in Serbian architecture and its political implications, Journal of the Society of Architectural Historians, Vol.56, No. 1, pp. 16-41.

Papadakis, Y. (2005) “Locating the Cyprus Problem: Ethnic Conflict and the Politics of Space”. Macalaster International, Vol. 15, pp. 81-98.

Pemble, J. (1987) The Mediterranean Passion. Victorians and Edwardians in the South. Oxford: Oxford University Press.

Perkins, B. (2001). Building Type Basics for Elementary and Secondary Schools. New York: John Wiley & Sons, Inc.

Petit, T. (1999) Eteocypriot myth and Amathusian reality. Journal of Mediterranean Archaeology, Vol. 12, No. 1, 108-120.

Philippou, S. (2009) What makes Cyprus European? Curricular responses of Greek-Cypriot civic education to Europe. Journal of Curriculum Studies, Vol. 41, No. 2, 206.

Photiou, M. (2010) Representations of Cyprus: Impressions of gender and culture during British Rule (1878-1959). In M. Raesch (ed.): Mapping Minds. Oxford: Inter-Disciplinary Press, pp. 77-83.

Photiou, S. (2005) Segregated Education in Cyprus between 1920 and 1935, PhD Thesis, Pennsylvania State University.

Piro, J. M. (2008) Foucault and architecture of surveillance: Creating regimes of power in schools, shrines, and society. Educational Studies, Vol. 44, 30-46.

Pyla, P., Phokaides, P. (2009) Architecture and Modernity in Cyprus. European Architectural History Newsletter No. 2/09, 26-49.

Pyla, P., Phokaides, P. (2011) Ambivalent politics and modernist debates in postcolonial Cyprus, The Journal of Architecture, Vol. 16, No.6, 885-913.

Rappas, A. (2006) The Cypriot Colonial Civil Servant: Practical Agency through Uncertain Identities. The Cyprus Review, Vol. 18, No. 1, 121-136.

Rappas, A. (2008) The elusive polity: Imagining and contesting colonial authority in Cyprus during the 1930s. Journal of Modern Greek Studies, Vol. 26, pp. 363-397.

Rappas, A. (2011) The Uncharted World of Cypriot Colonial Servants and the Ideological Foundations of British Rule. The Cyprus Review, Vol. 23, No.2, 57-76.

Richardson, P. (1997) Building the Dominion: Government Architecture in New Zealand, 1840 – 1922. PhD Thesis, University of Canterbury, New Zealand.

Richter, H. A. (2011) Çağdaş Kıbrıs'ın Kısa Tarihi 1878-2009. Lefkoşa: Galeri Kültür Yayınları. Almanca aslı: Kurze Geschichte des modernen Zypern 1878-2009. Wiesbaden-Erbenheim: Harrassowitz Verlag (2010).

Rigolon, A. (2010). European design types for 21st century schools: An overview. CELE Exchange, 2010/3, 1-8.

Şahin, S. (2008). The Discursive Construction of National Identity by the Newspapers in North Cyprus. PhD dissertation, University of Westminster, England.

Said, E. W. (1994) Culture and Imperialism. New York: Vintage.

Sadler, S. (2004) An Avant-garde Academy, in A. Ballentyne, Architectures: Modernism and After. Oxford: Blackwell Publishing, p. 39.

Schaar, K.W., Given, M., Theocharous, G. (1995). Under the Clock. Colonial Architecture and History in Cyprus, 1878 – 1960. Nicosia: The Bank of Cyprus.

Scriver, P. (2006). Placing in-between: Thinking through architecture in the construction of colonial-modern identities. National Identities, Vol. 8, No. 3, pp. 207-223.

Seaborne, M. (1971). The English School. Its Architecture and Organization 1370-1870. London: Routledge & Kegan Paul.

Sen, S. (2010). Between dominance, dependence, negotiation,and compromise: European architecture and urban planning practices in colonial India. Journal of Planning History, Vol. 9, No.4, 203-231.

Seretis, K. (2003). The British material presence in Cyprus (1878-1960): display for whom? Visibility, accessibility and adoption'. In S. Lawrence (ed.): Archaeologies of the British. Explorations of identity in Great Britain and its colonies 1600-1945. Milton Park, Abington: Routledge.

Sleight, G.F. (1935). Report of the Department of Education for the School Year 1933 – 1934. Nicosia. Cyprus: Government Printing Office.

Sleight, G.F. (1947). Report of the Department of Education for the Period 1942 – 1945. Nicosia, Cyprus: Government Printing Office.

Sleight, G.F. (1954) Report of the Department of Education for the School Year 1952-1953. Nicosia: Cyprus: Government Printing Office.

Smith, A. D. (1991). National Identity. London: Penguin Books.

Smith, A. D. (1999). Myths and Memories of the Nation. Oxford: Oxford University Press.

Smith, A. D. (2008). The Cultural Foundations of Nations. Hierarchy, Covenant, and Republic. Oxford: Blackwell Publishing.

Soysal, Y.N., and Strang, D. (1987). Construction of the first mass education systems in nineteenth-century Europe. Sociology of Education, vol. 62, no. 4, 277-288.

Süha, A. (1971). Turkish education in Cyprus, in The First International Congress of Cypriot Studies, 14-19 April 1969. Ankara: Publications of Institute for the Study of Turkish Culture.

Steadman, P. (2014). Building Types and Built Forms. Kibworth Beauchamp (UK): Matador.

Starkweather, H. (2009). Endangered site: Famagusta walled city, Cyprus. http: // www.smithsonianmag.com/travel/Endangered_Cultural_Treasures_Famagusta _Walled_City_Cyprus.html.

Talbot, J.E., and Cape, F.W. (1914) Report on Education in Cyprus 1913. Printed in London, England by Waterlow & Sons Limited.

Tozan, A. (2008) Bir Sömürge Modernleşme Örneği Olarak Kıbrıs'ta Kent ve Mimarlık (1878-1960). PhD Thesis, Istanbul Technical University.

UNESCO (1957). World Illiteracy at Mid-Century. A Statistical Study. Paris: UNESCO.

Vitale, F. (2010) Jacques Derrida and the politics of Architecture. Serbian Architectural Journal, 2010, no. 2, 215-226.

Weir, W.W. (1952). Education in Cyprus. Some Theories and Practices in Education in the Island of Cyprus Since 1878. Nicosia, Cyprus.

Westberg, J. (2015). Multiplying the origins of mass schooling: an analysis of the preconditions common to schooling and the school building process in Sweden, 1840-1900. History of Education, vol. 44, no. 4, 415-436.

Wittgenstein, L. (1958). Philosophical Investigations. Oxford: Basil Blackwell.

APPENDICES

Appendix A: Symbols and formulas used in spatial analysis

Name	Symbol	Explanation
	k	Number of nodes.
Total depth	*TD* (or TD_n)	The sum of topological depth from one node to all other nodes. $TD = (1 \times n_x) + (2 \times n_x) + \ldots + (X \times n_x)$.
Mean depth	*MD*	It is the average depth of a node in a given graph. The mean depth is calculated from $\mathrm{MD} = \frac{\sum_{i=1}^{n} D_i}{k-1}$ where D_i is the depth of *i*-th point.
Relative asymmetry	*RA*	Compares the depth of the system from a specific point with the theoretically possible depth and shallowness. The relative asymmetry of a node is calculated using $\mathrm{RA} = \frac{2(MD-1)}{k-2}$
Relative asymmetry	*RRA*	Describes the degree of isolation or depth of a node not only in comparison to its own system or set, but also in comparison with a suitably scaled and idealised benchmark configuration. RRA values are particularly useful when comparing across systems of different sizes. In a way it is an empirical way of normalising the total depth.
Integration	*i*	The reciprocal of RRA is known as the integration value

		i = 1/RRA.
Control value	*CV*	It is a measure of the amount of control a space holds towards its direct neighbours in a system. A control value higher than 1 indicates a stronger control compared to the ones lower than 1, which have lesser control of space.
Unrelativised difference factor	*H*	To measure the way in which culture and social relations express themselves through different degrees of spatial integration, Hillier et al. (1987) have developed an entropy based *H*-factor given by the equation $$H = -\sum\left[\frac{a}{t}\,\ell n\,\left(\frac{a}{t}\right)\right] + \left[\frac{b}{t}\,\ell n\,\left(\frac{b}{t}\right)\right] + \left[\frac{c}{t}\,\ell n\,\left(\frac{c}{t}\right)\right]$$ where a = the maximum *RA*, b = mean *RA*, c = minimum *RA* and $t = a + b + c$.
Relativised difference factor	*H**	The relativised factor *H** which has values between 0 (maximum difference or minimum entropy), and 2 (minimum difference or maximum entropy) $$H^* = \frac{H - \ell n\,2}{\ell n\,3 - \ell n\,2}$$ express culturally significant typological differences.

Appendix B: Syntactic Data of Selected Schools

Idadi Boys' School

		TDn	MDn	RA	i	CV
0	**0**	14	1.55	0.13	7.20	3.16
1	**1**	22	2.44	0.36	2.76	0.25
2	**2**	12	1.33	0.08	12.00	5.25
3	**3**	22	2.44	0.36	2.76	0.25
4	**4**	20	2.22	0.30	3.27	0.16
5	**5**	20	2.22	0.30	3.27	0.16
6	**6**	20	2.22	0.30	3.27	0.16
7	**7**	20	2.22	0.30	3.27	0.16
8	**8**	20	2.22	0.30	3.27	0.16
9	**9**	22	2.44	0.36	2.76	0.25
	Min	12.00	1.33	0.08	2.76	0.16
	Mean	**19.20**	**2.13**	**0.28**	**4.38**	**1.00**
	Max	22.00	2.44	0.36	12.00	5.25

Victoria Girls' School

		TDn	MDn	RA	i	CV
0	**0**	32	2.66	0.30	3.30	0.16
1	**1**	21	1.75	0.13	7.33	3.25
2	**2**	20	1.66	0.12	8.25	1.11
3	**3**	28	2.33	0.24	4.12	0.41
4	**4**	28	2.33	0.24	4.12	0.41
5	**5**	25	2.08	0.19	5.07	1.75
6	**6**	34	2.83	0.33	3.00	0.75
7	**7**	29	2.41	0.25	3.88	0.75

8	**8**	26	2.16	0.21	4.71	0.36
9	**9**	26	2.16	0.21	4.71	0.36
10	**10**	23	1.91	0.16	6.00	3.25
11	**11**	34	2.83	0.33	3.00	0.20
12	**12**	34	2.83	0.33	3.00	0.20
	Min	20.00	1.66	0.12	3.00	0.16
	Mean	**27.69**	**2.30**	**0.23**	**4.65**	**1.00**
	Max	34.00	2.83	0.33	8.25	3.25

Gazi Elementary School

		TDn	**MDn**	**RA**	**i**	**CV**
0	**0**	24	2.66	0.41	2.40	0.50
1	**1**	16	1.77	0.19	5.14	1.12
2	**2**	10	1.11	0.02	36.00	7.50
3	**3**	18	2.00	0.25	4.00	0.12
4	**4**	18	2.00	0.25	4.00	0.12
5	**5**	18	2.00	0.25	4.00	0.12
6	**6**	18	2.00	0.25	4.00	0.12
7	**7**	18	2.00	0.25	4.00	0.12
8	**8**	18	2.00	0.25	4.00	0.12
9	**9**	18	2.00	0.25	4.00	0.12
	Min	10.00	1.11	0.02	2.40	0.12
	Mean	**17.60**	**1.95**	**0.23**	**7.15**	**1.00**
	Max	24.00	2.66	0.41	36.00	7.50

Turkish Boys' Lycée

		TDn	MDn	RA	i	CV
0	**0**	137	2.58	0.06	16.40	4.78
1	**1**	171	3.22	0.08	11.67	2.11
2	**2**	211	3.98	0.11	8.72	0.53
3	**3**	221	4.16	0.12	8.20	1.20
4	**4**	273	5.15	0.15	6.26	0.50
5	**5**	211	3.98	0.11	8.72	0.53
6	**6**	189	3.56	0.09	10.13	0.11
7	**7**	205	3.86	0.11	9.06	0.53
8	**8**	177	3.33	0.08	11.11	0.81
9	**9**	169	3.18	0.08	11.87	0.77
10	**10**	179	3.37	0.09	10.93	0.36
11	**11**	223	4.20	0.12	8.10	3.00
12	**12**	275	5.18	0.16	6.20	0.25
13	**13**	189	3.56	0.09	10.13	0.11
14	**14**	223	4.20	0.12	8.10	0.25
15	**15**	171	3.22	0.08	11.67	2.25
16	**16**	223	4.20	0.12	8.10	0.25
17	**17**	189	3.56	0.09	10.13	0.11
18	**18**	167	3.15	0.08	12.08	4.11
19	**19**	209	3.94	0.11	8.83	0.41
20	**20**	219	4.13	0.12	8.30	0.16
21	**21**	217	4.09	0.11	8.40	1.16
22	**22**	269	5.07	0.15	6.37	0.50
23	**23**	219	4.13	0.12	8.30	0.16
24	**24**	219	4.13	0.12	8.30	0.16
25	**25**	203	3.83	0.10	9.18	4.66

26	**26**	255	4.81	0.14	6.82	0.16
27	**27**	255	4.81	0.14	6.82	0.16
28	**28**	255	4.81	0.14	6.82	0.16
29	**29**	255	4.81	0.14	6.82	0.16
30	**30**	239	4.50	0.13	7.40	1.00
31	**31**	287	5.41	0.16	5.88	2.33
32	**32**	339	6.39	0.20	4.81	0.33
33	**33**	339	6.39	0.20	4.81	0.33
34	**34**	221	4.16	0.12	8.20	4.33
35	**35**	273	5.15	0.15	6.26	0.20
36	**36**	273	5.15	0.15	6.26	0.20
37	**37**	273	5.15	0.15	6.26	0.20
38	**38**	273	5.15	0.15	6.26	0.20
39	**39**	211	3.98	0.11	8.72	6.25
40	**40**	263	4.96	0.15	6.56	0.14
41	**41**	263	4.96	0.15	6.56	0.14
42	**42**	263	4.96	0.15	6.56	0.14
43	**43**	263	4.96	0.15	6.56	0.14
44	**44**	263	4.96	0.15	6.56	0.14
45	**45**	263	4.96	0.15	6.56	0.14
46	**46**	275	5.18	0.16	6.20	0.25
47	**47**	325	6.13	0.19	5.06	0.50
48	**48**	273	5.15	0.15	6.26	1.25
49	**49**	253	4.77	0.14	6.89	3.00
50	**50**	303	5.71	0.18	5.51	1.25
51	**51**	355	6.69	0.21	4.56	0.50
52	**52**	305	5.75	0.18	5.46	0.25

53	**53**	305	5.75	0.18	5.46	0.25
	Min	137.00	2.58	0.06	4.56	0.11
	Mean	**242.18**	**4.56**	**0.13**	**7.82**	**1.00**
	Max	355.00	6.69	0.21	16.40	6.25

Teacher's Training College

		TDn	MDn	RA	i	CV
0	**0**	112	4.14	0.24	4.12	4.25
1	**1**	138	5.11	0.31	3.16	0.20
2	**2**	138	5.11	0.31	3.16	0.20
3	**3**	94	3.48	0.19	5.23	2.45
4	**4**	138	5.11	0.31	3.16	0.20
5	**5**	138	5.11	0.31	3.16	0.20
6	**6**	120	4.44	0.26	3.77	0.25
7	**7**	82	3.03	0.15	6.38	1.50
8	**8**	120	4.44	0.26	3.77	0.25
9	**9**	106	3.92	0.22	4.44	0.75
10	**10**	78	2.88	0.14	6.88	2.25
11	**11**	106	3.92	0.22	4.44	1.25
12	**12**	102	3.77	0.21	4.68	0.75
13	**13**	80	2.96	0.15	6.62	0.37
14	**14**	104	3.85	0.21	4.55	0.25
15	**15**	132	4.88	0.29	3.34	0.50
16	**16**	84	3.11	0.16	6.15	6.33
17	**17**	110	4.07	0.23	4.22	0.12
18	**18**	110	4.07	0.23	4.22	0.12

19	**19**	110	4.07	0.23	4.22	0.12
20	**20**	110	4.07	0.23	4.22	0.12
21	**21**	110	4.07	0.23	4.22	0.12
22	**22**	106	3.92	0.22	4.44	2.12
23	**23**	132	4.88	0.29	3.34	0.33
24	**24**	132	4.88	0.29	3.34	0.33
25	**25**	106	3.92	0.22	4.44	0.62
26	**26**	130	4.81	0.29	3.40	1.50
27	**27**	156	5.77	0.36	2.72	0.50
	Min	78.00	2.88	0.14	2.72	0.12
	Mean	**113.71**	**4.21**	**0.24**	**4.28**	**1.00**
	Max	156.00	5.77	0.36	6.88	6.33

Namık Kemal Lycée,

		TDn	**MDn**	**RA**	**i**	**CV**
0	**0**	172	3.24	0.08	11.57	0.05
1	**1**	120	2.26	0.04	20.56	14.41
2	**2**	125	2.35	0.05	19.13	0.11
3	**3**	172	3.24	0.08	11.57	0.05
4	**4**	166	3.13	0.08	12.19	3.05
5	**5**	218	4.11	0.11	8.35	0.25
6	**6**	218	4.11	0.11	8.35	0.25
7	**7**	218	4.11	0.11	8.35	0.25
8	**8**	172	3.24	0.08	11.57	0.05
9	**9**	172	3.24	0.08	11.57	0.05

10	**10**	172	3.24	0.08	11.57	0.05
11	**11**	106	2.00	0.03	26.00	0.16
12	**12**	172	3.24	0.08	11.57	0.05
13	**13**	172	3.24	0.08	11.57	0.05
14	**14**	172	3.24	0.08	11.57	0.05
15	**15**	172	3.24	0.08	11.57	0.05
16	**16**	172	3.24	0.08	11.57	0.05
17	**17**	172	3.24	0.08	11.57	0.05
18	**18**	172	3.24	0.08	11.57	0.05
19	**19**	106	2.00	0.03	26.00	0.16
20	**20**	172	3.24	0.08	11.57	0.05
21	**21**	109	2.05	0.04	24.60	14.21
22	**22**	161	3.03	0.07	12.75	0.05
23	**23**	161	3.03	0.07	12.75	0.05
24	**24**	161	3.03	0.07	12.75	0.05
25	**25**	161	3.03	0.07	12.75	0.05
26	**26**	161	3.03	0.07	12.75	0.05
27	**27**	161	3.03	0.07	12.75	0.05
28	**28**	161	3.03	0.07	12.75	0.05
29	**29**	161	3.03	0.07	12.75	0.05
30	**30**	161	3.03	0.07	12.75	0.05
31	**31**	161	3.03	0.07	12.75	0.05
32	**32**	161	3.03	0.07	12.75	0.05
33	**33**	161	3.03	0.07	12.75	0.05
34	**34**	161	3.03	0.07	12.75	0.05
35	**35**	105	1.98	0.03	26.50	18.72
36	**36**	157	2.96	0.07	13.25	0.04

37	**37**	157	2.96	0.07	13.25	0.04
38	**38**	157	2.96	0.07	13.25	0.04
39	**39**	157	2.96	0.07	13.25	0.04
40	**40**	157	2.96	0.07	13.25	0.04
41	**41**	157	2.96	0.07	13.25	0.04
42	**42**	157	2.96	0.07	13.25	0.04
43	**43**	157	2.96	0.07	13.25	0.04
44	**44**	157	2.96	0.07	13.25	0.04
45	**45**	157	2.96	0.07	13.25	0.04
46	**46**	157	2.96	0.07	13.25	0.04
47	**47**	157	2.96	0.07	13.25	0.04
48	**48**	157	2.96	0.07	13.25	0.04
49	**49**	157	2.96	0.07	13.25	0.04
50	**50**	157	2.96	0.07	13.25	0.04
51	**51**	157	2.96	0.07	13.25	0.04
52	**52**	157	2.96	0.07	13.25	0.04
53	**53**	157	2.96	0.07	13.25	0.04
	Min	105.00	1.98	0.03	8.35	0.04
	Mean	**160.11**	**3.02**	**0.07**	**13.61**	**1.00**
	Max	218.00	4.11	0.11	26.50	18.72

Ataturk Elementary School

		TDn	MDn	RA	i	CV
0	**0**	146	2.70	0.06	15.55	2.05
1	**1**	111	2.05	0.03	25.10	0.28
2	**2**	111	2.05	0.03	25.10	0.28
3	**3**	105	1.94	0.03	28.05	0.42
4	**4**	144	2.66	0.06	15.90	5.45
5	**5**	199	3.68	0.10	9.86	0.20
6	**6**	110	2.03	0.03	25.55	21.41
7	**7**	114	2.11	0.04	23.85	20.91
8	**8**	163	3.01	0.07	13.12	0.04
9	**9**	163	3.01	0.07	13.12	0.04
10	**10**	163	3.01	0.07	13.12	0.04
11	**11**	163	3.01	0.07	13.12	0.04
12	**12**	161	2.98	0.07	13.37	1.04
13	**13**	163	3.01	0.07	13.12	0.04
14	**14**	163	3.01	0.07	13.12	0.04
15	**15**	163	3.01	0.07	13.12	0.04
16	**16**	163	3.01	0.07	13.12	0.04
17	**17**	163	3.01	0.07	13.12	0.04
18	**18**	163	3.01	0.07	13.12	0.04
19	**19**	163	3.01	0.07	13.12	0.04
20	**20**	163	3.01	0.07	13.12	0.04
21	**21**	163	3.01	0.07	13.12	0.04
22	**22**	163	3.01	0.07	13.12	0.04
23	**23**	163	3.01	0.07	13.12	0.04
24	**24**	163	3.01	0.07	13.12	0.04

25	**25**	163	3.01	0.07	13.12	0.04
26	**26**	163	3.01	0.07	13.12	0.04
27	**27**	163	3.01	0.07	13.12	0.04
28	**28**	163	3.01	0.07	13.12	0.04
29	**29**	167	3.09	0.07	12.66	0.04
30	**30**	167	3.09	0.07	12.66	0.04
31	**31**	167	3.09	0.07	12.66	0.04
32	**32**	167	3.09	0.07	12.66	0.04
33	**33**	167	3.09	0.07	12.66	0.04
34	**34**	167	3.09	0.07	12.66	0.04
35	**35**	167	3.09	0.07	12.66	0.04
36	**36**	167	3.09	0.07	12.66	0.04
37	**37**	167	3.09	0.07	12.66	0.04
38	**38**	167	3.09	0.07	12.66	0.04
39	**39**	167	3.09	0.07	12.66	0.04
40	**40**	167	3.09	0.07	12.66	0.04
41	**41**	167	3.09	0.07	12.66	0.04
42	**42**	167	3.09	0.07	12.66	0.04
43	**43**	167	3.09	0.07	12.66	0.04
44	**44**	167	3.09	0.07	12.66	0.04
45	**45**	167	3.09	0.07	12.66	0.04
46	**46**	167	3.09	0.07	12.66	0.04
47	**47**	167	3.09	0.07	12.66	0.04
48	**48**	167	3.09	0.07	12.66	0.04
49	**49**	214	3.96	0.11	8.94	0.50
50	**50**	197	3.64	0.09	10.00	0.14
51	**51**	197	3.64	0.09	10.00	0.14

52	**52**	197	3.64	0.09	10.00	0.14
53	**53**	197	3.64	0.09	10.00	0.14
54	**54**	197	3.64	0.09	10.00	0.14
	Min	105.00	1.94	0.03	8.94	0.04
	Mean	**163.63**	**3.03**	**0.07**	**13.76**	**0.99**
	Max	214.00	3.96	0.11	28.05	21.41

Turkish Girls Lycée,

		TDn	**MDn**	**RA**	**i**	**CV**
0	**0**	286	3.57	0.06	15.33	0.19
1	**1**	213	2.66	0.04	23.75	17.21
2	**2**	244	3.05	0.05	19.26	4.11
3	**3**	321	4.01	0.07	13.11	1.14
4	**4**	323	4.03	0.07	13.00	0.14
5	**5**	323	4.03	0.07	13.00	0.14
6	**6**	323	4.03	0.07	13.00	0.14
7	**7**	400	5.00	0.10	9.87	0.50
8	**8**	214	2.67	0.04	23.58	10.19
9	**9**	293	3.66	0.06	14.83	0.07
10	**10**	281	3.51	0.06	15.72	0.32
11	**11**	293	3.66	0.06	14.83	0.07
12	**12**	293	3.66	0.06	14.83	0.07
13	**13**	281	3.51	0.06	15.72	0.32
14	**14**	293	3.66	0.06	14.83	0.07
15	**15**	293	3.66	0.06	14.83	0.07

16	**16**	281	3.51	0.06	15.72	0.32
17	**17**	293	3.66	0.06	14.83	0.07
18	**18**	293	3.66	0.06	14.83	0.07
19	**19**	281	3.51	0.06	15.72	0.32
20	**20**	293	3.66	0.06	14.83	0.07
21	**21**	429	5.36	0.11	9.05	0.25
22	**22**	429	5.36	0.11	9.05	0.25
23	**23**	429	5.36	0.11	9.05	0.25
24	**24**	429	5.36	0.11	9.05	0.25
25	**25**	429	5.36	0.11	9.05	0.25
26	**26**	429	5.36	0.11	9.05	0.25
27	**27**	429	5.36	0.11	9.05	0.25
28	**28**	429	5.36	0.11	9.05	0.25
29	**29**	292	3.65	0.06	14.90	0.04
30	**30**	280	3.50	0.06	15.80	0.29
31	**31**	292	3.65	0.06	14.90	0.04
32	**32**	292	3.65	0.06	14.90	0.04
33	**33**	280	3.50	0.06	15.80	0.29
34	**34**	292	3.65	0.06	14.90	0.04
35	**35**	292	3.65	0.06	14.90	0.04
36	**36**	280	3.50	0.06	15.80	0.29
37	**37**	292	3.65	0.06	14.90	0.04
38	**38**	292	3.65	0.06	14.90	0.04
39	**39**	292	3.65	0.06	14.90	0.04
40	**40**	292	3.65	0.06	14.90	0.04
41	**41**	292	3.65	0.06	14.90	0.04
42	**42**	292	3.65	0.06	14.90	0.04

43	**43**	292	3.65	0.06	14.90	0.04
44	**44**	292	3.65	0.06	14.90	0.04
45	**45**	292	3.65	0.06	14.90	0.04
46	**46**	292	3.65	0.06	14.90	0.04
47	**47**	350	4.37	0.08	11.70	2.83
48	**48**	350	4.37	0.08	11.70	2.83
49	**49**	350	4.37	0.08	11.70	2.83
50	**50**	350	4.37	0.08	11.70	2.83
51	**51**	428	5.35	0.11	9.08	0.25
52	**52**	349	4.36	0.08	11.74	2.83
53	**53**	428	5.35	0.11	9.08	0.25
54	**54**	428	5.35	0.11	9.08	0.25
55	**55**	349	4.36	0.08	11.74	2.83
56	**56**	428	5.35	0.11	9.08	0.25
57	**57**	428	5.35	0.11	9.08	0.25
58	**58**	349	4.36	0.08	11.74	2.83
59	**59**	428	5.35	0.11	9.08	0.25
60	**60**	425	5.31	0.10	9.15	2.25
61	**61**	504	6.30	0.13	7.45	0.33
62	**62**	504	6.30	0.13	7.45	0.33
63	**63**	504	6.30	0.13	7.45	0.33
64	**64**	425	5.31	0.10	9.15	2.25
65	**65**	504	6.30	0.13	7.45	0.33
66	**66**	504	6.30	0.13	7.45	0.33
67	**67**	425	5.31	0.10	9.15	2.25
68	**68**	504	6.30	0.13	7.45	0.33
69	**69**	504	6.30	0.13	7.45	0.33

70	**70**	425	5.31	0.10	9.15	2.25
71	**71**	504	6.30	0.13	7.45	0.33
72	**72**	503	6.28	0.13	7.47	0.33
73	**73**	424	5.30	0.10	9.18	2.25
74	**74**	503	6.28	0.13	7.47	0.33
75	**75**	503	6.28	0.13	7.47	0.33
76	**76**	424	5.30	0.10	9.18	2.25
77	**77**	503	6.28	0.13	7.47	0.33
78	**78**	503	6.28	0.13	7.47	0.33
79	**79**	424	5.30	0.10	9.18	2.25
80	**80**	503	6.28	0.13	7.47	0.33
	Min	213.00	2.66	0.04	7.45	0.04
	Mean	**367.95**	**4.59**	**0.09**	**12.02**	**1.00**
	Max	504.00	6.30	0.13	23.75	17.21

BTMK

		TDn	MDn	RA	i	CV
0	**0**	227	3.43	0.07	13.32	0.16
1	**1**	162	2.45	0.04	22.34	2.48
2	**2**	177	2.68	0.05	19.32	0.20
3	**3**	177	2.68	0.05	19.32	0.20
4	**4**	168	2.54	0.04	21.02	10.64
5	**5**	164	2.48	0.04	21.88	9.41
6	**6**	189	2.86	0.05	17.43	0.31
7	**7**	287	4.34	0.10	9.70	0.14
8	**8**	222	3.36	0.07	13.75	5.57
9	**9**	287	4.34	0.10	9.70	0.14
10	**10**	287	4.34	0.10	9.70	0.14
11	**11**	287	4.34	0.10	9.70	0.14
12	**12**	287	4.34	0.10	9.70	0.14
13	**13**	227	3.43	0.07	13.32	0.21
14	**14**	233	3.53	0.07	12.84	0.07
15	**15**	233	3.53	0.07	12.84	0.07
16	**16**	233	3.53	0.07	12.84	0.07
17	**17**	233	3.53	0.07	12.84	0.07
18	**18**	181	2.74	0.05	18.65	0.10
19	**19**	233	3.53	0.07	12.84	0.07
20	**20**	233	3.53	0.07	12.84	0.07
21	**21**	233	3.53	0.07	12.84	0.07
22	**22**	233	3.53	0.07	12.84	0.07
23	**23**	233	3.53	0.07	12.84	0.07
24	**24**	229	3.46	0.07	13.15	0.07

25	**25**	219	3.31	0.07	14.01	5.07
26	**26**	284	4.30	0.10	9.83	0.16
27	**27**	284	4.30	0.10	9.83	0.16
28	**28**	284	4.30	0.10	9.83	0.16
29	**29**	284	4.30	0.10	9.83	0.16
30	**30**	284	4.30	0.10	9.83	0.16
31	**31**	223	3.37	0.07	13.66	3.07
32	**32**	288	4.36	0.10	9.66	0.25
33	**33**	288	4.36	0.10	9.66	0.25
34	**34**	288	4.36	0.10	9.66	0.25
35	**35**	229	3.46	0.07	13.15	0.07
36	**36**	229	3.46	0.07	13.15	0.07
37	**37**	177	2.68	0.05	19.32	0.11
38	**38**	229	3.46	0.07	13.15	0.07
39	**39**	229	3.46	0.07	13.15	0.07
40	**40**	229	3.46	0.07	13.15	0.07
41	**41**	229	3.46	0.07	13.15	0.07
42	**42**	229	3.46	0.07	13.15	0.07
43	**43**	154	2.33	0.04	24.37	24.00
44	**44**	219	3.31	0.07	14.01	0.03
45	**45**	219	3.31	0.07	14.01	0.03
46	**46**	219	3.31	0.07	14.01	0.03
47	**47**	219	3.31	0.07	14.01	0.03
48	**48**	219	3.31	0.07	14.01	0.03
49	**49**	219	3.31	0.07	14.01	0.03
50	**50**	219	3.31	0.07	14.01	0.03
51	**51**	219	3.31	0.07	14.01	0.03

52	**52**	219	3.31	0.07	14.01	0.03
53	**53**	219	3.31	0.07	14.01	0.03
54	**54**	219	3.31	0.07	14.01	0.03
55	**55**	219	3.31	0.07	14.01	0.03
56	**56**	219	3.31	0.07	14.01	0.03
57	**57**	219	3.31	0.07	14.01	0.03
58	**58**	219	3.31	0.07	14.01	0.03
59	**59**	219	3.31	0.07	14.01	0.03
60	**60**	219	3.31	0.07	14.01	0.03
61	**61**	218	3.30	0.07	14.11	0.53
62	**62**	218	3.30	0.07	14.11	0.53
63	**63**	219	3.31	0.07	14.01	0.03
64	**64**	219	3.31	0.07	14.01	0.03
65	**65**	219	3.31	0.07	14.01	0.03
66	**66**	219	3.31	0.07	14.01	0.03
	Min	154.00	2.33	0.04	9.66	0.03
	Mean	**229.10**	**3.47**	**0.07**	**13.76**	**1.00**
	Max	288.00	4.36	0.10	24.37	24.00

Ataturk Teachers' Training Academy

		TDn	MDn	RA	i	CV
0	**0**	177	3.00	0.06	14.50	0.03
1	**1**	119	2.01	0.03	28.51	27.00
2	**2**	117	1.98	0.03	29.50	0.06
3	**3**	177	3.00	0.06	14.50	0.03
4	**4**	177	3.00	0.06	14.50	0.03
5	**5**	177	3.00	0.06	14.50	0.03
6	**6**	177	3.00	0.06	14.50	0.03
7	**7**	177	3.00	0.06	14.50	0.03
8	**8**	177	3.00	0.06	14.50	0.03
9	**9**	177	3.00	0.06	14.50	0.03
10	**10**	177	3.00	0.06	14.50	0.03
11	**11**	177	3.00	0.06	14.50	0.03
12	**12**	177	3.00	0.06	14.50	0.03
13	**13**	177	3.00	0.06	14.50	0.03
14	**14**	117	1.98	0.03	29.50	0.06
15	**15**	177	3.00	0.06	14.50	0.03
16	**16**	177	3.00	0.06	14.50	0.03
17	**17**	177	3.00	0.06	14.50	0.03
18	**18**	177	3.00	0.06	14.50	0.03
19	**19**	177	3.00	0.06	14.50	0.03
20	**20**	177	3.00	0.06	14.50	0.03
21	**21**	117	1.98	0.03	29.50	0.06
22	**22**	177	3.00	0.06	14.50	0.03
23	**23**	177	3.00	0.06	14.50	0.03
24	**24**	177	3.00	0.06	14.50	0.03

25	**25**	177	3.00	0.06	14.50	0.03
26	**26**	117	1.98	0.03	29.50	0.06
27	**27**	177	3.00	0.06	14.50	0.03
28	**28**	177	3.00	0.06	14.50	0.03
29	**29**	177	3.00	0.06	14.50	0.03
30	**30**	111	1.88	0.03	32.90	29.50
31	**31**	169	2.86	0.06	15.55	0.03
32	**32**	169	2.86	0.06	15.55	0.03
33	**33**	169	2.86	0.06	15.55	0.03
34	**34**	169	2.86	0.06	15.55	0.03
35	**35**	169	2.86	0.06	15.55	0.03
36	**36**	169	2.86	0.06	15.55	0.03
37	**37**	169	2.86	0.06	15.55	0.03
38	**38**	169	2.86	0.06	15.55	0.03
39	**39**	169	2.86	0.06	15.55	0.03
40	**40**	169	2.86	0.06	15.55	0.03
41	**41**	169	2.86	0.06	15.55	0.03
42	**42**	169	2.86	0.06	15.55	0.03
43	**43**	169	2.86	0.06	15.55	0.03
44	**44**	169	2.86	0.06	15.55	0.03
45	**45**	169	2.86	0.06	15.55	0.03
46	**46**	169	2.86	0.06	15.55	0.03
47	**47**	167	2.83	0.06	15.84	1.03
48	**48**	169	2.86	0.06	15.55	0.03
49	**49**	169	2.86	0.06	15.55	0.03
50	**50**	225	3.81	0.09	10.30	0.50
51	**51**	169	2.86	0.06	15.55	0.03

52	**52**	169	2.86	0.06	15.55	0.03
53	**53**	169	2.86	0.06	15.55	0.03
54	**54**	169	2.86	0.06	15.55	0.03
55	**55**	169	2.86	0.06	15.55	0.03
56	**56**	169	2.86	0.06	15.55	0.03
57	**57**	169	2.86	0.06	15.55	0.03
58	**58**	169	2.86	0.06	15.55	0.03
59	**59**	169	2.86	0.06	15.55	0.03
	Min	111.00	1.88	0.03	10.30	0.03
	Mean	**167.96**	**2.84**	**0.06**	**16.46**	**1.00**
	Max	225.00	3.81	0.09	32.90	29.50

Oguz Veli Secondary School

		TDn	**MDn**	**RA**	**i**	**CV**
0	**0**	141	3.91	0.16	6.00	0.50
1	**1**	106	2.94	0.11	9.00	1.06
2	**2**	73	2.02	0.05	17.02	13.33
3	**3**	108	3.00	0.11	8.75	0.06
4	**4**	108	3.00	0.11	8.75	0.06
5	**5**	106	2.94	0.11	9.00	0.39
6	**6**	105	2.91	0.10	9.13	1.56
7	**7**	140	3.88	0.16	6.05	0.33
8	**8**	108	3.00	0.11	8.75	0.06
9	**9**	72	2.00	0.05	17.50	0.11
10	**10**	108	3.00	0.11	8.75	0.06

11	**11**	108	3.00	0.11	8.75	0.06
12	**12**	108	3.00	0.11	8.75	0.06
13	**13**	108	3.00	0.11	8.75	0.06
14	**14**	72	2.00	0.05	17.50	0.11
15	**15**	108	3.00	0.11	8.75	0.06
16	**16**	108	3.00	0.11	8.75	0.06
17	**17**	108	3.00	0.11	8.75	0.06
18	**18**	108	3.00	0.11	8.75	0.06
19	**19**	71	1.97	0.05	18.00	18.00
20	**20**	106	2.94	0.11	9.00	0.05
21	**21**	106	2.94	0.11	9.00	0.05
22	**22**	106	2.94	0.11	9.00	0.05
23	**23**	106	2.94	0.11	9.00	0.05
24	**24**	106	2.94	0.11	9.00	0.05
25	**25**	106	2.94	0.11	9.00	0.05
26	**26**	106	2.94	0.11	9.00	0.05
27	**27**	106	2.94	0.11	9.00	0.05
28	**28**	106	2.94	0.11	9.00	0.05
29	**29**	106	2.94	0.11	9.00	0.05
30	**30**	106	2.94	0.11	9.00	0.05
31	**31**	106	2.94	0.11	9.00	0.05
32	**32**	106	2.94	0.11	9.00	0.05
33	**33**	106	2.94	0.11	9.00	0.05
34	**34**	106	2.94	0.11	9.00	0.05
35	**35**	106	2.94	0.11	9.00	0.05
36	**36**	106	2.94	0.11	9.00	0.05
	Min	71.00	1.97	0.05	6.00	0.05

Mean	**104.75**	**2.90**	**0.10**	**9.68**	**1.00**
Max	141.00	3.91	0.16	18.00	18.00