# Ebusuud Primary School Restoration Project

Kasap Serdar*, Arslan Şirin*, Irmak Yavuz**

* Nişantaşı University, Vocational school - Department of Architectural Restoration, Istanbul- TURKEY

** Istanbul Commerce University, Industrial Design Department, Istanbul- TURKEY

Department of Third Author, Faculty of First Author, Affiliation of First Author, Postal address

(serdar.kasap@nisantasi.edu.tr, bonsai_agle@hotmail.com, yirmak@ticaret.edu.tr)

‡ Corresponding Author; First Author, serdar.kasap@nisantasi.edu.tr, Tel: +90 212 210 1010,

*Received: 06.11.2018 Accepted:28.12.2018*

**Abstract-** Our country Turkey has a very rich heritage in terms of cultural assets. Yet, due to lack of care and attention enough for their preservation given to cultural assets, this heritage is vanishing off. In order to make Istanbul - the meeting point of civilizations - a livable and sustainable "World City" with its natural, historical and cultural structure, it is in this respect aimed to harvest maximum benefit by providing service with its limited resources and to have most important artifacts among the countries in the region. Istanbul Eyüp region, selected as the area of study, has been drawing attention to itself as a part of the traditional texture while offering a diversity and wealth within itself. In the scope of this study, Eyüp Ebussuut Primary School, designed by Mimar Kemalettin Bey and one of the early examples of 1st National Architecture Order early, has been surveyed, and after drawing site plans, plan sections, facade and details belonging to the structure as well as the layout plan that defines the structure and premises, we have carried on with the analytical stage of the survey. Material distortion/damage analyses have been done and structural issues have been identified in the scope of and analytical survey. Then carried on with restitution phase. Restitution issues have been discussed and similar buildings of the same era have been studied in order to address those. Necessary interventions for cleaning, reinforcement, integration, renewal and utilization of the building so that it could maintain its effective use have been developed along with restoration project.

**Keywords:** Conservation, Survey, Restoration, Ebussuut Primary School, Cultural Assets

## 1. Introduction

One of the early examples of Republic Period, Eyüp Ebussuut Primary School in Istanbul has kept its originality despite the long time passed since it has been raised. (The goal is) to bring forward its different periods throughout its life and current condition, and under the light of this background, to set forth solution proposals and thus be able to hand over this building, which has a history of around a hundred years-old, to the next generations.

Ottoman Empire, under the effect of 19th century Westernization, had held up some monumental structures in Europe as examples. In this study, an inventory survey through the digital media in the Ottoman Archives has been employed in order to draw restitution proposal of the building, which previously had been surveyed for identifying the deterioration issues.

After documenting the present conditions of the building, the era in which the building -with its premises- had been firs built have been studied through old maps, documents and photographs. The changes it has experienced from the date it has been built to day has been identified using in-situ analyses and personal meetings

Considering the list of requirements that has been given by the school principal and projected to enable the school to carry on its function without damaging its originality, a project proposal has been developed to document and reevaluate the primary school building, which had survived fairly until today.

## 2. Building Survey Report

### *2.1 History of the School*

Mimar (Architect) Kemalettin designed and built Eyüp Ebussuut Primary School, called Reşadiye Numune Mektebi-i İbtidaisi then, at personal request of Mehmet V. (Mehmed Reşad) with a tomb for him right next to it. One of the early figures to adopt and implement the 1st National Architecture Order, Mimar Kemalettin used arch, columns, oriels and corbels from Ottoman architecture. He separated the blocks with respect to their functions and emphasized them in the facade with the help of coves and protrusions.

The school has been refurbished into Eyüp Muhtelit Secondary School, in return updating its education. The building had gone through a modification in 1957. In these modifications, without changing its original identity, some amendments had been done and flooring had been changed. Following these changes, the school was used as Eyüp High School starting 1957-58 school year. Some minor changes such as conversion of premises then present such as coal bunker in 1972-73 was done and then the school served as Eyüp Ebussuut Secondary School from 1972-73 school year on. Today, the building functions as a primary school. (Figure -1)

**Figure 1 –** Eyüp Ebussuut Primary School

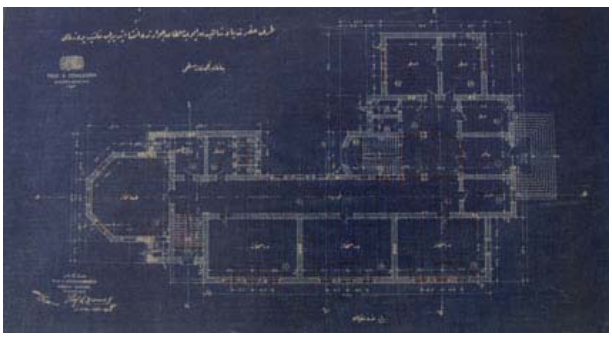
### *2.2 Plan and Design*

The building is located in Istanbul, Eyüp Province, Eyüp Merkez District, İskele Street and Karakol Arkası Lane, on plot 41, island 50 and parcel 4 and is stands on an area of 1,859 square meters. Numune Reşadiye mektebi was on the seaside of Haliç (Golden Horn) and two doors of the schoolyard opened (next) to Haliç shore. Since opening of coastal road of Haliç built between 1985-1987, the school kept its place on the coastline until this period(Figure 2).

reşadiye Numune Mektebi is the first school Mimar Kemalettin designed (Yavuz, 2009). It has a fairly modest design compared to the Tomb of Mehmed V he had simultaneously designed and built, yet it still has a coherent approach with the building. The building plan is made in line with the education paradigm of the time. (Figure 3) Administrative rooms are located far away from the classes. The classes on the other hand are arranged on the North-East front, facing towards the correct lightning angle to the North.

**Figure 2 –** View of Reşadiye Numune Mektebi and Sultan Mehmed Resad V from Haliç (Yavuz, 2009)

The school has a body of octagonal shape facing Haliç, of which the ground floor is a cafeteria and upper floor a prayer room (small mosque). This body speaks the same language as the Tomb of Mehmed Resad V that the architect simultaneously built does. Dome effect was used in many of the buildings designed throughout the 1st National Architecture Order. However, from the fact that this place in Reşadiye Mektebi is one for prayer and that it seeks for coherence with the Tomb next to it, one can understand that it was designed to be a brick dome. These bodies are used as classes after enactment of the Tevhid-i Tedrisat (Law on Unity of Education). The octagonal room on the ground floor has been converted to a laboratory with ceramic tiles applied to the walls. The said ceramic tiles do not match the building's original identity. Yet the rooms on each side of the octagonal tower on both floors are still used as storage rooms today.



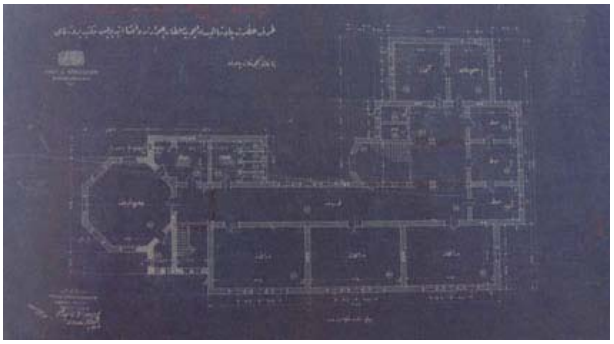


**Figure 3 -** Ground and 1st floor, Mimar Kemalettin's drawings. Floor Plan, 1910 (Batur, 2009).

Sharp arch windows and wide cornices are used in the building, and these features of the building reached to date without any change. It is fairly simple compared to the Tomb, which is right next to it and was built simultaneously with it. Steel beams are used in the flooring (Yıldırım, 2009). The places of these beams are shown in the drawings of Mimar Kemalettin from 1910. The school building is of brick and features load-bearing walls.

The first design shows an entry only in the North-West front. However at the building phase, a door that opens from men's restroom to the yard and that connects the yard and the hall to which classes and students' stairs connect. Right next to this door has been added an arch window that was not in the first project. This is inferred from the photograph that Mimar Kemalettin has taken in 1910s.

Entree has a distinct place in Kemalettin's designs and 1st National Architecture Order. The entrance has a crown gate design, inspired from Turkish Architecture. (Figure 4) The crown gate is made of cut stone. It is clear that the gate is built with marble blocks and that these blocks were kept as is until recently. Yet the main door of the building was changed in recent alterations and another crown gate of cut stone has been placed into the place.

**Figure 4** - Eyüp Reşadiye Numune Mektebi, 1910's (Benden, 2005).

Flat arched crown gate is framed with moulding. This frame brings itself out today. It is thought that the signature of Sultan Mehmed Resad V were planned to engraved on a roundel over the crown gate in Mimar Kemalettin's original project. In the signature says "Mehmed Han, son of Abdulmecid, ever-triumphant (Rresad)" The signature could not ever be applied, but one can see that the Crescent and Star in the Turkish flag after proclamation of the Republic has been engraved in 1927. A blank place has been reserved for the name of the school to be scripted on the cap stone right below the signature. However, it is inferred that under the circumstances with those wars Ottoman Empire were in then, there might have not been an environment that could meet such craftsmanship. The name of the school is shown on a signboard. A photograph taken in 1914 proves these interpretations.

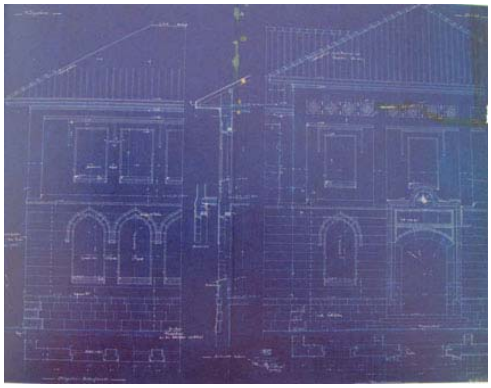


**Figure 5 -** Mimar Kemalettin Drawings, System Details, 1910 (Batur, 2009).

There's also an inner door used as a windbreaker next to the crown gate in the entrance of the building. This is a door is as wide as the main gate made of wood and glass. The renovated door today has traces of the original design. We presume that the Southeastern door that opens to the yard was added in the later renovations. We also presume that the middle window used for lighting purposes in the ground floor has been converted to a door opening the hall (to which classes connect) to the schoolyard through renovations in 1957 that included adding 7 stairs to this window.

**Figure 6 -** The schoolyard exit added in the renovations in 1957

The windows on the entrance floor are lancet arches. The same arc type is used for the second floor of the octagonal prayer room, a mere duplication of the lower floor. On the upper floor, rectangular windows are used. As in all structures of the Mimar Kemalettin, moldings were used to

separate the various surface sections from each other and to follow the curves of the window arches and clarify the windows. These moldings and lancet windows still strongly give its character to the building.

First floor windows of the structure are placed in the squares on the walls withdrawn back into them, so the upstairs walls' loads are less burdened. On the other hand, windows and floors in the front are separated by a cornice line. These cornices are still in the building today. It is inferred from the early period photographs that these cornices and window wreaths were painted in dark burgundy in the renovations, yet in the original design the arches of the windows were painted white up to the square areas where the windows were placed and that other sections were painted in beige color (natural stone coloring) to increase the effect of cut stone. In the original condition of the construction, it is understood that the window chests are designed to be wooden and open towards two sides away from each other, while the upper sides are fitted with a wooden frame. Today, all of the window frames are modified, and pvc frames are preferred instead of wood ones. The window sills are formed by tilting the wall outward. These sections are covered with layers of plaster and paint which become increasingly thicker and make the original design incomprehensible.

In front of the building are twelve pieces of geometric reliefs today. Apart from that, there is no decoration on the façades. In its original design, the entrance floor on the facade was plastered just like the Tomb of Sultan Mehmet Resat V, which was built at the same time, and the cut stone image was given with horizontal joints. In order to emphasize the angles of the architectural structure, this effect is increased in the facade with the cut stones buried on the wall. Today, horizontal joints and corner stones continue to give the characteristics of the building.

The roof has slopes in four directions and is a wooden chamfered roof covered with tiles. There is a dome on only the octagonal body which is the prayer room . The octagonal tower is roofed with brick dome. Fringes are used as extensions of chamfered roofs. With wooden crookes, simple geometric (gridal) decorations were made under the eaves. Over time, these beads have been refurbished as needed and a distinctive look has been achieved in which different wood veneers are used together.

*2.3. Interiors*

The ceilings of the building are formed with circular forms to provide acoustics in the lower floor classrooms. Today these forms still exist. In other parts of the structure, wooden paneling is used. (Figure 7) These coatings have been modified as needed, but the concordance of the structure has been disrupted with the use of different timbers in different sizes.

**Figure 7 -** Ceiling in ground floor classrooms and corridor to which classrooms are opened

The columns used in the entrance hall in the structure are load-bearing. Diamond column caps are estimated to be placed on these columns . In the present state of the building, these ornaments have been renovated and the plaster casts have been decorated to differ from the lower floor and the upper floor decorations. Drywall column headings added later do not match the the original character of the structure. The original column headings are presumed to be in the Tarz-ı Müstevi style, an important style that inspired Mimar Kemalettin and is found to be in the book titled "Usul-i Mimari-yi Osmanlı" (Ottoman Architecture Order), which was ordered to Ibrahim Edhem Pasha, the Minister of Public Works during the reign of Sultan Abdülaziz and published in 3 languages through preparations for the 1873 Vienna International Exhibition. (Bozdoğan, 2002).

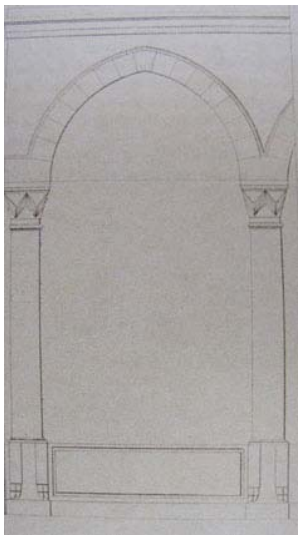


**Figure 7 -** Tarz-ı Mühtelit (Compound Style)

There are two sets of stairs in the school, one for students' use and another for teachers'. The staircase in the entrance hall opens to halls of teacher's rooms. This staircase is built in the original form of marble stone blocks of masonry. It is presumed that the staircase handrails are made of iron. The main staircase has original structure intact to the present day. Mimar Kemalettin achieved to continue providing a plasticity in the building with the openings (windows) he placed on the walls of the stairs and enabling the teachers see the students hall from the stairs they use

(Figure 8). In the wall between the stairs and the corridor, there are 6 lancet-arched openings in total with three on each floor, one of which is different in size. The body of the main staircase in the building was given an oval shape, which made it look like a tower.

**Figure 8 –** Openings in the main staircase wall

In the construction, the staircase for the students located at the end of the hall of classrooms is quite narrow compared to the one in the entrance. Marble coating is again used in this starcase. But with a renovation done in 1970s, it is clear that the original staircase coverings have been covered with marble with the use of mortar . Apart from those, a wooden ladder is put in of the rooms in the upper floor to reach the roof. Today, this wooden ladder is very damaged and unusable.

It is estimated that the floor of the building used to be stone paved. In the entrance and the stairs, framed ceramics with figures are used. It is presumed that the floor is refurbished with ceramic mosaics in 1957 renovation, and that the redecoration continued with different materials from then on.

## 3. Restitution Report

### *3.1. About the Time the School was Built*

Eyüp Ebussuut Primary School was designed in 1910 by Mimar Kemalettin and built in 1911. The school is an early example of a 1st National Architecture Order. The design of the building and conditions in which it was raised provide information about how and in what format the architectural elements of the structure were shaped.

Eyüp Ebussuut Primary School was ordered to be built as Reşadiye Numune Mektebi-i İbtidaisi (Resadiye Primary School) after the proclamation of the Second Constitutional Era. These years are known as the constitutional and parliamentary period of the Ottoman Empire. Starting from the 19th century, the Ottoman Empire has made reforms in many areas. During this period, the Ottoman Empire's administration and functioning have been centralized, and the state identity has been reshaped with expanding bureaucracy and military ( Quataert, 2008) Two important developments that shaped that era are Sultan Mahmud II's declaration of Constitution in 1839 and the enactment of first Constitutional Law (Kanun-i Esasi) in 1856 . Resad Efendi, the Heir to the Crown then, has claimed the throne and, in memory of Sultan Mehmet II the Conqueror, was named after him taking the name Mehmed V on 27 April 1909 after the March 31 Incident (Ortaylı, 2010). Sultan Mehmed Resad continued the reforms of the Ottoman Empire that began in the 19th century and continued the modernization of the state institutions and education.

Until the 19th century, schools and the poor were helped by religious communities or philanthropists in the Ottoman Empire. The schools orphanages and hospices were built by the donations by clergy or directly by the philanthropists and salaries of their staff ( teachers and academic staff) were again paid with donations (Faroqhi, 2005). With the centralization of the state after the 19th century, schools became centralized as well and important changes were made in education. In this century, trade, health and education ministries have been established ( Quataert, 2008) .

With the advise of French Ministry of Education in 1869, Education Code of Conduct has been enacted and a 3-level education model with Rüşdiye (Secondary School), Sivil İdadi (Civil High School) and Sultaniye was created in the Empire( Zürcher , 2000). During the reign of Sultan Abdulhamid in the following years, the network of primary and secondary schools were extended until the establishment of the Republic. In 1909 a law for the modernization of education in Madrasa education programs with courses on non-religious subject has been added and education has been brought up to 12 years (Yavuz, 2009). In addition, Madrasa education has been modernized and courses such as history, geography, mathematics and French have been added besides religious courses. However, during this period physical spaces that will provide Western and religious education together was limited. Resadiye Primary School has been built to provide training in that fashion.

During this period, the Mimar Kemalettin has designed and built numerous schools. Sultan Mehmed Resad V has awarded the design of Resadiye Primary School together with that of the tomb to Mimar Kemalettin (Figure 2).

## 4. Restoration Report

### *4.1. Actions to be Implemented in the Structure*

The actions to be taken in the In Ebussuud Primary School building are listed below considering the function and current need program. Although the restoration work to be done will attempt to preserve or uncover the original state of the building, the necessary actions and changes to the function will be taken to ensure that the decrees of the High Council are respected and decisions are in accordance with the Venice Charter principles. Accordingly, the articles of the 1964 Venice Charter and the High Council decisions constituted the basic strategy of the restoration of the building, and all the intervention decisions taken were considered within this framework.

Accordingly, that are considered to be performed on the structure within the framework of the restoration principles and methods are as follows.

-Marseille terracota tiles, the material for Ebussuud Primary School roof superstructure, will be removed, the wooden elements of the free standing roof (purlins, rafters, studs, under tile, blinds, etc.) that rot or deform will be replaced with original form dimensions and materials, weakened (if any) metal fastener parts (nails, bolts, nuts, etc.) of the wooden roof will be strengthened, waterproofing with bitumen cardboard on the roof and heat insulation with glass wool inside the roof will be done and Ala turca tile coating will be made in accordance with the original of the rooftop cover.

-Strengthening will be made at the joints, knots and connection points of the timber frame system of the free standing roof, which forms the roof system of the Ebussuud Primary School building, rotting and rusting metal joints and fasteners (nails, bolts, rivets, nuts, etc.) will be replaced, old and decaying wooden elements (rafters, purlins, furring strips, laths, struts, tie-pieces and stitches) that suffer from deformation with will be replaced with new pieces in accordance with their original shape (Figure 9).

**Figure 9 –** Wooden Free Standing Roof Elements

-Ebussuud Primary School building will be renewed in the same material form and size as the example of the existing -but later- closed skylight on the roof.

-The existing fluted plaster in the North and East facade will be preserved, plaster that was applied later on the wall will be carefully scraped without any harm. Original fluted plaster will be applied, followed by application of one layer of waterproof and two layers of acrylic paint.

-Later, stone sills that lost their functions when covered with plaster will be replace with the same form sizes and materials to suit its original condition.

-All of the present PVC window frames of the structure will be removed and replaced with woodwork that match the details of the original traditional format (see Figure 10).

**Figure 10 –** Structure Overview

All the existing iron doors of the structure will be removed and replaced with woodwork that match the details of the original traditional format.

The door opening on the southern side of the building that is being used as the entrance to the men's restroom will be closed. The iron door in this place will be dismantled and the door space will be closed with the material matching the original. Also the concrete ladder that is being used to go up to the restroom is to be removed.

In the ground floor laboratory, the entrance iron glazings of the rooms facing the north and south facades will be removed, and wooden glazing will be made in accordance with the traditional details.

- Brick walls and iron door that were built later on at the lower entrance of the marble staircase on the north east side of the building in the ground floor corridor will be opened by removing them.

-The existing marks of the door in the outer façade under the staircase in the North East is clear and its outer surface is closed with annexed premises. All adjoining premises right next to the building will be removed. A door will me made matching the details of the original traditional format.

- A door matching the details of the original traditional format will be built to the place where a mark of the door is clear that was closed before with bricks on the side facing south of the first floor of the building.

Existing wooden doors will be repaired, rotting parts, if any, will be renewed according to their original condition, will be impregnated and painted with a paint matching the original color and specification.

-Non-functioning metal accessories (door knobs, hinges) of the existing wood doors will be renewed according to existing samples, and the ones that will be used in-situ will be maintained and repaired.

-Roof plastic rain gutters and plastic rain downspouts at the roof skirting of the building will also be removed and replaced with metal rain downspouts.

- Missing lead coatings on the top of the dome will be renewed in accordance with the original.

- The existing paint job of stone surface on the exterior facade of the building will be scraped, and all stone surfaces will be cleaned with a soft brush and pressurized water (Max: 4 Atm.).

- The western entrance door of the building will be cleaned by first brushing with plastic nail brushes on marble surfaces of stairs and windows and then wiping with a cloth soaked with non-ionic detergent water. For dirt that cannot be cleaned, AB 57 will be used.

-The existing windows that have been closed afterwards will renewed with the same form material and that suits their original.

-The plaster sections that are damp in the basement floor walls will be scraped, the walls will be ventilated and dried, It will be plastered and painted with the water-proof additive material that matches the original.

-The plaster on the floor arch in the ceiling of the basement will be scraped, the flooring will be ventilated and plastered with water-proof material to match the original.

-The existing painted surfaces on the profiles of floor arch in the ground floor ceiling will be carefully cleaned and will be applied two coats of anti rust material.

- Rotting parts and non-original completions (plywood, any lathes and timber that does not conform with the original) in the first floor woodwork ceiling will be renewed in accordance with the original, the existing paint will be scraped, impregnite will be applied and impregnated with the help of brush or paint gun, and will be painted in accordance with a paint in the original color and specifications.

Required repair jobs or material renewal/renovation on the ground floor of the building at the entrance to the Western front and at the sections that need repair jobs in the immediate stairway landing at the first floor where the covering is 20/20 tiles will be done, and then will be carefully wiped and waxed. The existing floor covering in the spaces where the slab bottom and floor tile mosaic were made afterwards will be removed, and be replaced with the original 20/20 mosaic tiles coating matching the original texture.

-The existing ceramics on the walls of the floor room no. Z-006 will be dismantled and the plaster underneath will be scraped and re-coated with appropriate material that matches the original, then a layer of water-repellent acrylic paint will be applied, followed by final application of two coats of acrylic paint.

-Existing paint on the interior walls will be scraped. Plasters will be repaired, a layer of water repellent material, and two coats of acrylic paint will be applied.

-Existing paint of the staircase iron handrails will be scraped, and will be painted with two coats of oil paint after one layer of anti rust application.

-30x Free length cut stone coating side walk will be done around the building. Base drainage system will be done with Ø20cm drenflex pipes in the base elevation, inspection manholes will be installed with certain intervals in the corners. In addition, existing manhole in the garden and the building will be serviced and repaired.

## 5. Restoration Applications

**Picture 11 -** Roof Dismantling Production

**Picture 12 -** Replacement of Roof Materials

**Picture 13 -** Replacement of Roof Materials

**Picture 14 -**Wall Masonry

**Picture 15 –** Reinforcement (Stainless Steel) Manufacturing

**Picture 16 –** Reinforcement with Carbon-fiber Network

## 6. Conclusion

Considering the function and current program of needs in Ebussuud Primary School, the articles of the 1964 Venice Charter and the High Council decisions constituted the basic strategy of the restoration of the building, and all the intervention decisions taken were considered within this framework.

Although the restoration decisions taken will attempt to preserve or uncover the original state of the building, the necessary actions and changes to the function have been taken to ensure that the decrees of the High Council are respected and decisions are in accordance with the Venice Charter principles.

An thus, Ebussuud Primary School building conservation project has been prepared to ensure minimizing the damage to historical assets and hand one of the most important works of our history to future generations. It has been the most important point in our efforts to protect the originality of the structure, to apply the traditional material, technique and construction system in both project and application phases.

**REFERENCES**

Batur, A., (ed), 2009. İstanbul Vakıflar Bölge Müdürlüğü Mimar Kemaleddin Proje Kataloğu, T.C. Başbakanlık Vakıflar Genel Müdürlüğü-TMMOB Mimarlar Odası ortak yayını, Fayton Tanıtım, Ankara.

Benden, F., (2005). Eyüp, Bir Semte Gönül Vermek, Boyut Yayıncılık, İstanbul.

Bozdoğan, S., (2002). "İlk Modernler: Osmanlı Canlandırmacılığının Mirası", Modernizm ve Ulusun İnşası: Erken Cumhuriyet Türkiye'sinde Mimari Kültür, Metis Yayınları, İstanbul, s. 29-70.

Faroqhi, S., (2005). Osmanlı Kültürü ve Gündelik Yaşam: Ortaçağdam Yirminci Yüzyıla, Tarih Vakfı Yayınları, İstanbul.

Montani Efendi, de Launay, Marie, 1873. Usul-i Mi'mari-i Osmani /L'architecture Ottomane, İstanbul.

Ortaylı, İ., (2010). İmparatorluğun En Uzun Yüzyılı, Timaş Yayınları, İstanbul.

Quataert, D., (2008). Osmanlı İmparatorluğu 1700-1922, İletişim Yayınları, İstanbul.

Yavuz, Y., (2009). İmparatorluktan Cumhuriyete Mimar Kemalettin 1870-1927, T.C. Başbakanlık Vakıflar Genel Müdürlüğü-TMMOB Mimarlar Odası ortak yayını, Fayton Tanıtım, Ankara.

Yavuz, Yıldırım & Özkan, Süha, 2007. "Osmanlı İmparatorluğu'nun Son Yılları", Modern Türk Mimarlığı, R. Holod, A. Evin, S. Özkan (ed), TMMOB Mimarlar Odası Yayınları, Yalçın Matbaacılık, Ankara.

Zürcher, E., J., (2000). "Batının Etkisi ve İlk Modernleşme Girişimleri" ve "Türk Tarihinde Jön Türk Dönemi, 1908-1950, Modernleşen Türkiye'nin Tarihi, İletişim Yayınları, s. 21-136, s. 137-317.