



The Importance and Functionality of Urban Furniture; Case of Bilecik City, Turkey

¹Asst. Prof. Dr. Hilal Kahveci, ²Assoc. Prof. Dr. Parisa Göker

*¹⁻² Bilecik Şeyh Edebali University, Fine Arts and Design Faculty, Department of Interior Architecture and Environmental Design, Bilecik, Turkey
hilal.kahveci@bilecik.edu.tr*

ABSTRACT

Comprising an essential part of the urban components within the urban texture, the furniture elements connect urban life with communal living in addition to meeting the ever-growing need of usage. It is of vital importance in terms of ensuring the safety, comfort of the users, meeting aesthetical value principles, while also ensuring the functionality and practical affordability of the space. In this study, the urban furniture elements are described in the beginning, while also being classified based on the significance, properties and usage types. Moreover, examples of urban furniture are given on a global scale. The furniture elements that are used the most in the streets and boulevards of Bilecik City Center as the research area are identified, as well as analyzing their ergonomic and aesthetical characteristics & functionality from the viewpoint of users. In this context, each elements and furniture such as floor covering, boundary elements, water elements, bus stops, sales units, seating units, lighting elements, signs and informing boards, artistic objects and other elements are analyzed, thus being deeply analyzed within the framework of element diversity, functionality and design criteria. Examining the condition of the existing furniture elements, along with its suitability for the historical texture of Bilecik in line with the data collected throughout the study, various suggestions have been developed within the scope of creating unique urban spaces.

Keywords: Urban furniture, Urban space, Urban texture, Bilecik

INTRODUCTION

Due to urbanization, industrialization and difficult living conditions, it has significantly increased communal activities. Today, efforts to improve the quality of cities and urban areas are becoming increasingly important (İnceoğlu, Aytuğ 2019). Cities should be handled not only with buildings but also with areas outside the buildings. Urban spaces are expressed as "living organisms" that can respond to changing socio-economic conditions and the cultural fabric of cities. The viability of the elements in designing urban spaces is determined by the ability to respond to users' expectations (Çoban, Demir 2014). According to another definition, urban spaces; It is the name given to the spaces where common or personal needs are met as a result of collective life in cities, and which change over time depending on the socio-economic and cultural structure of the society. Urban spaces are the places where human beings perform 4 main functions such as shelter, work, fun, rest and transportation (Güremen 2011).

Urban Design is about land use, integration of the built form, city construction, space construction and community design. Suitable urban design contributes to the economic vitality and health of a community, and to vibrant and successful public spaces. In line with these conflicts, parks, plazas, markets, water elements and natural areas of cities can come together in a context of mutually pleasing support for people from different cultural groups. As these experiences are repeated, public spaces become vessels to carry positive communal meaning (Zavari et al. 2016). Urban outdoor reinforcement elements should be designed to cover the needs of different users, such as the needs of children and the elderly. Its purpose is to strengthen people's social life. (Gupta and Bhatti, 2015).



Urban reinforcement elements, like other elements of a city, are seen as a part of urban identity as well as having aesthetic values. According to the definitions that urban experts present, any equipment that somehow is annexed to the urban bodies and spaces should be accounted as a part of urban furniture. With this context, it is included in the urban furniture definition circle with its various designs as street lines to bus stops and trash bins in a city. Urban tourism is a social phenomenon and cultural tourism seeks to experience (Nadim, Azani, 2016). Street furniture is a total term for products placed on the streets for different purposes. It is included; seats, traffic barriers, traffic signs, telephone boxes, post boxes, bollards, traffic lights, streetlamps, transport stops, cable car stops, taxi stands, open restrooms, wellsprings, watering troughs, remembrances, sculptures, and waste containers. A vital thought in designing street furniture is the manner by which it influences street safety (Rawan and Morsy, 2016).

Elements of urban furniture create the settings for resting, sitting and eating, and social encounters with others. Such arrangements can be of great importance to the elderly, those with limited mobility, and adults who have small children; but besides these functional aspect, urban furniture items such as benches and tables in parks and squares are socially important as they create a relaxing and attractive environment in these areas and bring people together. Appropriately selected and placed furniture can draw people to outdoor spaces and add to the pleasure of using these spaces; the main challenge is getting them outdoors, with the aim of making them feel welcome, relaxed, and involved. The quality of urban spaces, besides creating a sense of character and identity, can be seen in various cities, as well as the quality and layout of urban furniture: London's red telephone booths and Paris' metro entrances, for example, have become iconic and essential to these cities' identities. In addition to their functional and symbolic roles, items of Street furniture may also set standards and expectations of quality for the development of the areas where they are found and can serve as talking points for planning (Yücel, 2013).

The elements of street furniture should be compatible with each other and also with its environment. The lease and development conditions issued by Planning and Land Management contain specific street furniture requirements for some precincts. Designers should also check the master plan, design guidelines and other related planning documents for the arrangement of street furniture styles, colors (Act Government, 2010):

- exhibit high resistance to vandalism
- be durable against weathering and deterioration
- be suitable for use by people with a wide range of needs including children, the aged and people with disabilities
- have a low whole-of-life cost.

The urban is a whole formed by spaces. The reinforcement elements in the city constitute the identity of the space. The design works that start at the urban scale create a variety of activities within the city at the planning stage. The design process, which started with the concept of equipping the space, ensures the spreading of urban areas on a city scale. There are a number of design criteria required for urban furniture. The correct use of these designs are emerging that will increase the urban comfort and quality of life. Urban furniture created in this design process will include the identity of cities, their harmony with the architectural structure and their imaginary features (Aksu 2012).

Urban equipments, which are one of the basic elements that support people and their activities, offer various services and functions for people in urban areas (Yaylalı 1998). In addition to its functions such as directing users, urban furniture constitutes important factors that determine the spatial quality of the city (Demirtaş, Bostancı 2016). Accordingly, urban furniture positively affects both the formation of the identity and image of the cities and the functional and aesthetic features of the central areas and spaces in the cities. Therefore, urban furniture should follow the developing technology, changing living conditions and changes in the user structure (Najafidashtape, 2018).



The elements supporting the basic functions such as living, sheltering, protection, transportation, counseling, lighting, communication, games and sports, which are located in the areas of streets, roads, avenues and squares and in general or private use for recreational purposes, which are indicators of comfort and environmental quality, are called urban furniture. In addition, these elements are landscape elements that facilitate social life, provide communication between individuals, give a certain meaning to the space in terms of function and aesthetics, have different qualities and quantities, define and complement the space, and gain the appreciation of the users (Bulut et. al. 2008, Neufert 2013, Sağlık et. al. 2014).

According to the definitions, the features of urban furniture can be summarized as follows; Functionality, must be ergonomic, easy to maintain, aesthetic, original, safety, environmentally compatible, quality and durability (Erdoğan et. al. 2011).

Each of the urban furniture that make the city livable and perceptible has a different meaning and importance for the users and the city. The importance of these elements for users is that the visual and physical relationship they establish with the city is primarily through urban furniture and reinforcement elements. In terms of the city, these elements are important because of their qualifications that define, determine and customize their environment (Aksu 2012).

Urban furniture and reinforcement elements can be classified according to their functions as follows: (Erdem 1995; Yıldızci, 2001; Aksu 2012).

- Floor coverings (concrete, stone, wood, asphalt, brick etc.)
- Seating units (benches, chairs, group seating elements)
- Lighting elements (road illuminators, field illuminators)
- Signs and information signs (routers, locators, information communication boards)
- Limiters (limiters, deterrents, pedestrian barriers, traffic barriers)
- Water element (ornamental pools, fountains)
- Top cover items (stops, shades, pergolas, umbrellas, etc.)
- Sales units (kiosks, exhibition pavilions, buffets)
- Artistic objects (sculptures)
- Playground elements
- Other items (trash cans, flowerpot, bicycle parking spaces, square clocks, herbal items, flagpoles, etc.)

According to the technical equipment, we can group the urban furniture in two groups that are connected to the infrastructure and not connected (Güreman 2011, Sağlık et. al. 2014).

Table 1. Classification of urban furniture according to technical equipment

Urban Furniture Depending on Infrastructure	Urban Furniture Not Depending on Infrastructure
<ul style="list-style-type: none">• Lighting elements• Information transmission and sign boards• Telephone kiosk• Public transport stops• Square hours• Water item• Sales units• Infrastructure facilities maintenance cover	<ul style="list-style-type: none">• Floor coverings• Trash cans• Flowerpots• Covering elements• Under tree protectors• Bicycle parks• Playground elements• Plastic art objects

Examples of Urban Furniture from the World

In urban design, arrangements of elements that create visual coherence produce eye-catching and memorable images. As elements complementing the image of a city, urban

furnishings play an active role in urban design as a whole, whether for their functional or aesthetic values (Ghorab, Caymaz, 2014).

Urban furniture is not a simple collection of decorative elements used to decorate the city. Elements of urban furniture aim to provide functionality and meet population needs, make life easier and fulfill a number of functional requirements. Thus, when urban furniture performs its functions, it contributes to protecting the health and well-being of city residents; facilitates accessibility and use for people with visual or physical disabilities; In addition to creating a consistent and environmentally friendly identity, it enables people to enjoy a pleasant life in the urban environment.

This section includes examples of various urban furniture in different parts of the world. As can be seen from the visuals, the element in every city is designed to reflect the identity and quality of the city. For example, although Granada and Malaga are a European union and developed city, it preserves its historical values and reflects the character of the city by carrying the use of the water element to the present. When we examine the example of the UK, sunbathing chairs were designed on sunny days due to the climate conditions of the country. In the case of Russia, despite the cold climate of the country, it is remarkable that they can create a greener city with the right plant preferences. In the analyzed examples, it was determined that artistic elements were generally designed to be the symbol of the city. It is understood that the place where the furniture used in all cities is designed in accordance with the climatic conditions, historical texture and city identity (Fig.1).

Lighting			
			
Malaga Old Town, Spain	Granada Old Town, Spain	Hermitage Avenue, St. Petersburg, Russia	Trevi Fountain, Rome, Italy
Benches and Seating			
			
New Castle, England	Yerevan, Armenia	Edinburgh	
Public Art			


			
Ankeruhr, Vienna, Austria	Yerevan Old Town, Armenia	Piazza Navona, Rome, Italy	Bratislava, Old Town, Slovakia
Signs			
			
Nevsky Ave. St. Petersburg	Borghese, Rome, Italy	Tivoli, Italy	
Water Elements			
			
Tivoli, Italy	Shah Goli, Tabriz, Iran	Malaga, Spain	Granada, Spain
Plant Material			
			
Peterhof, St. Peterburg, Russia	Shah Goli, Tabriz, Iran	New Castle, England	

Figure 1. Examples Form Different Countries (Orijinal, 2019)

MATERIAL AND METHOD

The main material of the study is the urban furniture elements located in the open spaces of Bilecik city (Fig.2). Within the scope of the study; urban equipment and street furniture



existing in Ertuğrul Gazi Street, Tevfik Bey Street, Atatürk Boulevard, Kurtul Street, Ali Rıza Özkay Street in Bilecik city were used. As an auxiliary material; observations made in the field of research, photography and literature studies on the subject were carried out. The reasons for choosing Bilecik city as a study material are its traditional, natural, historical, cultural features and the importance of the city in terms of tourism. The impact of the dynamics in the socio-economic and physical change in the city is felt as it is in all of today's settlements. All these effects and changes shape social life and also affect the public and the environmental image with the elements of urban furniture in these spaces. Bilecik is located on the south east of Marmara Region and on the junction point of Marmara, Black Sea, Central Anatolia and Aegean Regions. It is located between 39°39' and 40°31' north latitudes and 29°43' and 30°40' east longitudes. It is surrounded by Bolu and Eskişehir to the East, Kütahya from the South, Bursa from the West and Sakarya from the North. Bilecik, along with its 4.302 km² zone, is one of the smallest provinces in Turkey. It is ranked 65th in terms of zone size. Its total population is 204.116 and the population density of the province is (person/ km²) 47. The first settlement in Bilecik province dates back to 3000 BC. Bilecik's first name was Belekoma. Bilecik which have witnessed a lot of nation's civilization and dominion in history, is the place where the foundation center of Ottoman Empire after the Kayı Tribe's arrival from Middle Asia with 400 tents to Söğüt. Bilecik, which has an average altitude of 600 m above sea level, experiences the transition climate due to the fact that it is located at the intersection of 4 geographical regions (Marmara, Black Sea, Central Anatolia and Aegean Region) of Anatolia (BEBKA 2018, URL 2, 2019, Ocak vd. 2017). According to 2018 data, the total population of Bilecik province is 223 448 and the central district population is 81723 people.

As a method, literature research was made within the scope of the study and continued with field study. During the fieldwork, existing urban furniture elements were identified and their photos were taken. Each urban furniture were evaluated under separate headline. In second stage of research construction material, function and suitability of each element were determined. At the last stage, suggestions have been developed within the scope of qualified environmental formation of urban furniture.

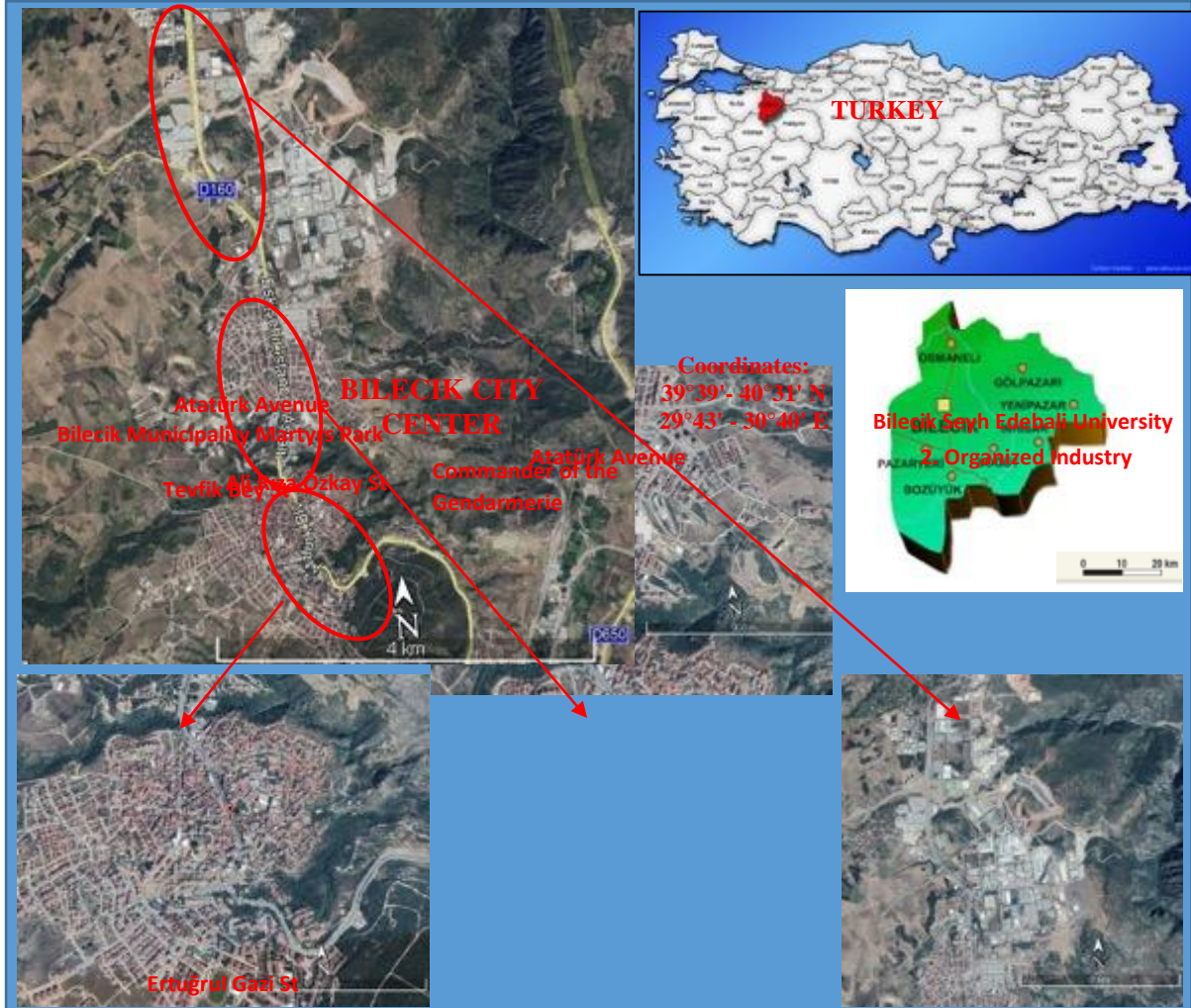


Figure 2. The area examined within the scope of the study (Original, 2020)

RESULTS AND DISCUSSION

The aim of this study carried out in the example of Bilecik city is to examine the elements of urban furniture in the city center in terms of functionality, ergonomics and sustainability. As a result of the data obtained, suggestions for the future were developed by determining the status and usability of the existing elements of urban furniture.

• Floor Coverings

In the city center, concrete slab is generally used as a floor covering for the pavements along the road. When flooring samples were evaluated in terms of color, texture and pattern, it was found that they did not provide integrity with the environment. The flooring materials used in various streets of the city center were created from different patterns and colors and it was determined that they were not correct both visually and aesthetically and technically. In addition, some parts of the paving were damaged. It has been determined that these distortions cause problems in terms of pedestrian safety and must be repaired.

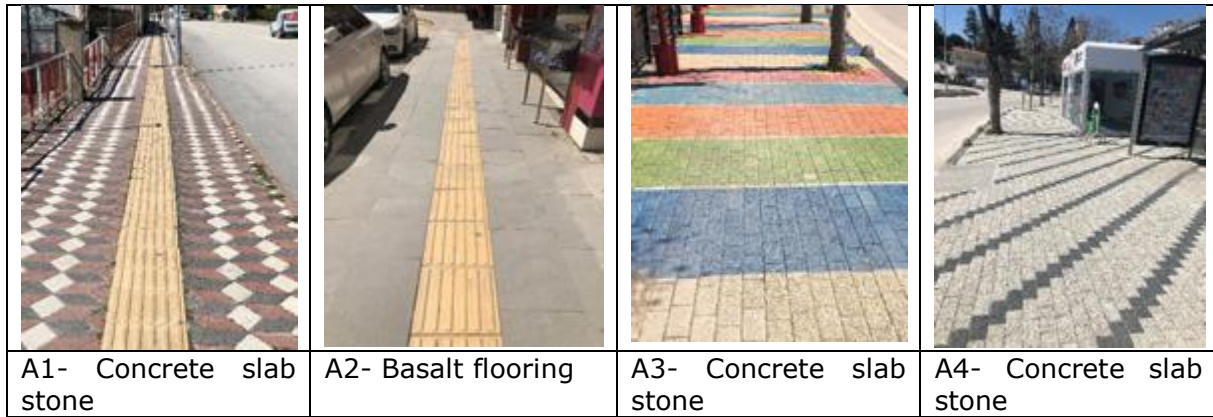


Figure 3. Examples of Floor Coverings

• **Seating Units**

The presence of stationary activities such as waiting, sitting, reclining and resting in urban areas paves the way for socializing activities. Therefore, seating units are an important issue in terms of socialization in urban areas. The existence of these activities reveals the use and vitality of a space (Mumcu et. al. 2017). For this reason, seating units are an important issue in terms of socialization and use of urban areas in cities. Seating units should be arranged with simple design and material that will not be affected by external conditions. Also, the longevity and sustainability of the material is very important. In addition, seating units should have a comfortable, ergonomic design. There are a limited number of seating units in Bilecik city center. Since there are no neighborhood parks where the public can spend time, there is not a large number of seating units. It has been determined that the existing seating units consist of a combination of wood, wood-iron and wood-concrete. At the east entrance of Tevfikbey Street, there is a seating unit (B1) made of marble and wood obtained from marble quarries in Bilecik. Although it is an aesthetically and functionally correct design, it has an uncomfortable effect when sitting ergonomically for a long time. In addition, the absence of a leaning component can cause posture disorder in humans. The seating units (Figure B3) which are located on the Atatürk Boulevard at the entrance of Bilecik city, made entirely of wood, are worn and are not visual and aesthetic in terms of color and texture. The seating unit (Figure B4), which is made with the concrete-wood combination located in Bilecik Municipality's Martyrs' Park, uses a natural form in accordance with the nature harmonization design criteria. It creates an inviting effect by providing integrity with the plant material located behind the seating unit.

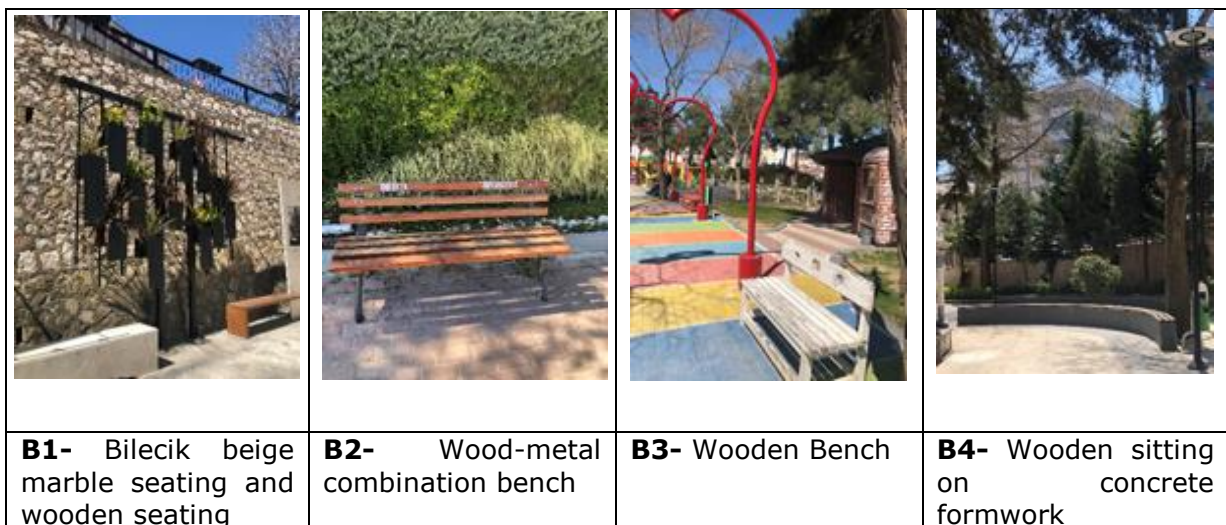


Figure 4. Examples of Seating Units

• **Lighting Elements**

The main purpose of the lighting elements is to reveal the function, shape and texture of the elements of urban furniture located outside as well as the lighting function. Lighting elements made of materials such as metal, casting, and brass are used independently from the infrastructure in developed countries, and are also artistic elements in the city. The lighting elements in Bilecik city center have different design features. The lighting elements at the entrance of the city (Figure C4) is designed in red in the shape of a heart. This design made on the sidewalk at the city entrance does not match the historical texture of the city. Although it is visually and aesthetically remarkable, but the place of use is not suitable. The solar powered lighting element located on Eskişehir-İstanbul Asphalt Avenue (Figure C1) is designed with simple and plain lines. It has been determined that this lighting element is suitable for the urban texture with its material and solar energy feature. The lighting element located in the median on the main artery (Figure C3) has the quality of road lighting used throughout the country, and it has been determined that it is in harmony with the city and the environment in terms of functionality and aesthetics. The C2 lighting element used in Tevfikbey Street has been used in the historical street and addresses the national feelings with the Turkish flag. It has been found to be appropriate in terms of aesthetics, ergonomics and functionality.

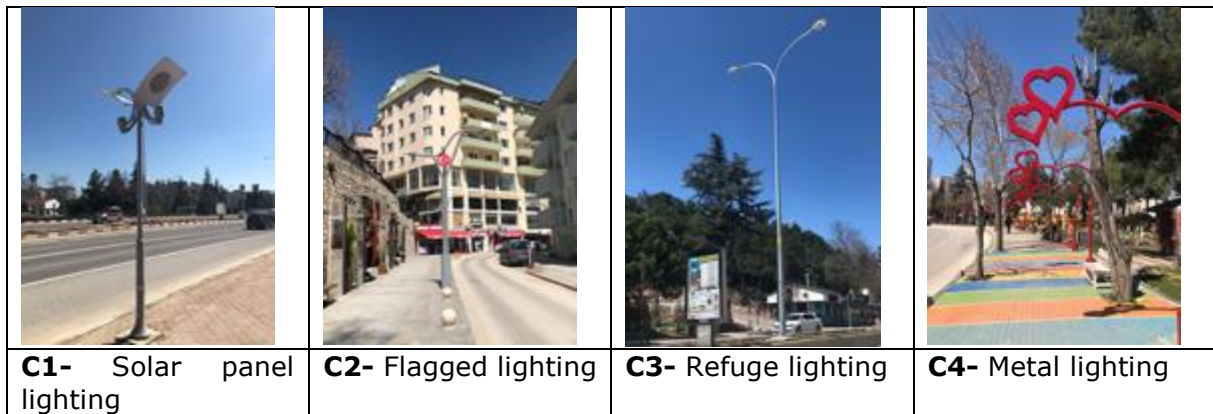


Figure 5. Examples of Lighting Elements

• **Sign and Information Boards**

The purpose of positioning the sign and information boards is to facilitate transportation and to inform domestic and foreign users. (Yörük et. al. 2006). Attention should be paid to the height, size and position of these elements. Especially the height and legibility of the section with signs and writings should be in accordance with the dimensions (TS 13813) determined by Turkish Standards Institution within the scope of ergonomic design criteria (URL 1, 2020). In addition, the reflection of sunlight or night vision should be considered in the colors used on these boards.

Metal is used in the building material of advertisement billboards on the main artery of the city center. The right choice is made as a structural material, but since the billboard with lighting is not used, it provides readability only during daylight hours. CP (City Poster) was used as pedestal billboards on the main street and in the neighborhoods. However, since "City Light Poster" is not used, it is possible to be seen only during the day. The direction and sign boards used for vehicles and pedestrians are in good situation and it doesn't need any repair.



Figure 6. Examples of Sign and Information Boards

• **Boundry Elements**

The purpose of the boundary elements is to fulfill functions such as creating privacy, defining boundaries and protecting. It is seen that the limiting elements used in the city center of Bilecik consist of a combination of marble, concrete, metal and aluminum-glass. Considering the traditional texture of the city, it was found that the material used was not suitable. The material used in marble barriers (Figure E1), which is positioned to limit the area reserved for pedestrians and vehicles and to control traffic, visually and aesthetically adapt to the urban texture. The cage system limiting elements used in Kurtul Alley (Figure E2) are designed to keep the physical transition under control, but they do not provide visual and aesthetic integrity. Repair and painting is required. The boundary element consisting of concrete material (Figure E3) on Ertuğrul Gazi Street was built to prevent vehicles from parking on the sidewalk. The main artery of Bilecik city center consists of a narrow street and vehicles usually park on the side of the street or sidewalks. With this method, parking of vehicles on pavements is prevented, and this functional management does not spoil the city aesthetics visually and physically. The barrier consisting of aluminum-glass combination in front of the Gendarmerie on the main street is positioned to prevent physical passage from the street to the pavement. Since this area is located at the exit of the city center and where the vehicles pass quickly, it was applied to ensure that pedestrians pass through the street only using the overpass. It has been determined that these elements made for the purpose of protection are aesthetically and visually suitable, but the use of glass materials is dangerous since it is close to the vehicle transition area.

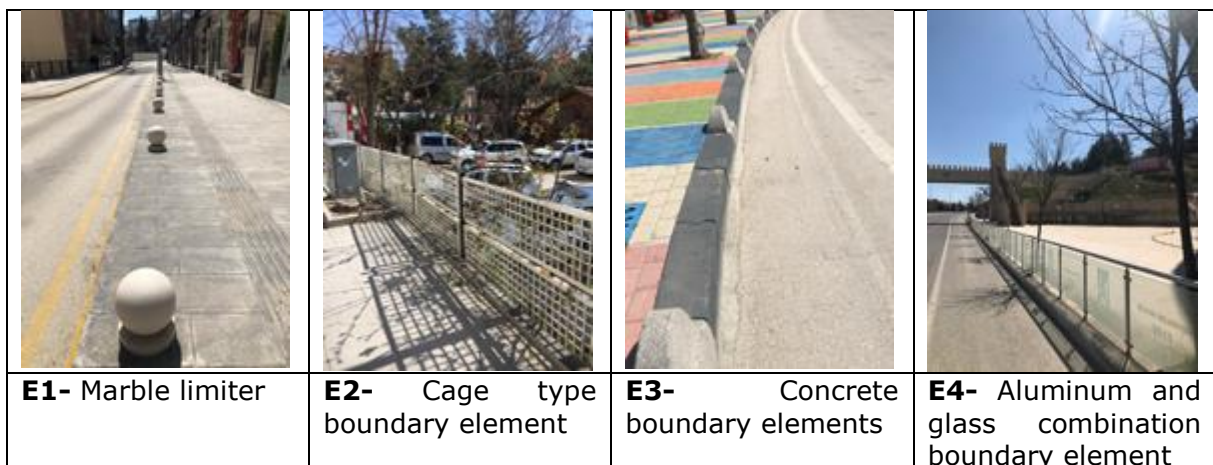


Figure 7. Examples of Boundry Elements

• Water Elements

Water is an indispensable element in the city as well as in parks and gardens. It is an important issue in the city centers in terms of both visual and aesthetic and spiritual and hygiene. It is known that before the urbanization and industrialization period, the fountains in the cities were made to satisfy the need for drinking water. Nowadays, it has lost its traditional function since tap water is not suitable for drinking. In addition to fountains as water element, it provides aesthetically and visually storey to the city in elements such as pools, grotto waterfalls.

It is seen that the water elements with various forms and functions in Bilecik city center are generally designed in accordance with the traditional texture of the city. Bilecik is known for its mines. The structural material of the fountains located in the city center reflects this feature. There are traditional fountains with a dome and the art of decoration on the mirror stone (Figure F1- F2) that reflects Ottoman architecture throughout the city. Marble was used in the pool (abreuvior) section of these fountains. On the square on Ali Rıza Özkay Street, there is a fountain made of marble (Figure F3), which also has a Şadırvan (water tank with fountain) attribution. There are Iznik tile tiles in the epitaph section of the fountain. The most important feature of this fountain is to attract people's attention by playing the mehter anthem when the faucet is opened. This fountain traditional wall fountain (Figure F4) extends along the Kültür Sitesi Family Tea Garden wall, consists of three water basins. However, the traditional decoration art was not included in the mirror stone of fountain. There is a fountain made of marble (Figure F5) in Bilecik Municipality Martyrs' park. There is a faucet in every facade of this fountain. The fountain is divided into eight sections with eight marble columns. The faucet mounted on the mirror stone is decorated with a stone motif. The mirror stones of this fountain, which consists of an octagonal form, consist of eight pieces independently of each other and stone decoration was made on the marble.

Pools with fountain are characteristic of Islamic garden art and it manifested itself in different forms in both palace gardens and modest home gardens in all period. There is a pool with fountain in Tea Garden. Color and odor effects were created by creating flower arteries around the pool. The artificial grotto waterfall (Figure F7) located on the hill provides a natural view in the city. The last water element we examined within the scope of the research is the artificial waterfall located in Ertuğrul Gazi Street (Figure F8). Pools designed in sets according to the topography of the area make movement to the water. In addition, the sound of water creates the effect of peace and happiness in humans. It has been determined that the water elements in Bilecik city are generally suitable for the urban texture and address the user in terms of aesthetics, visual and functional aspects.





Figure 8. Examples of Water Elements

- **Bus Stops**

Bus stops with aluminum-PVC construction are located throughout the city. As can be seen from the images in Figures G2 and G4, bus stops are designed within the scope of universal design criteria. There are also advertising billboards and stop information at the stops. There are Smart Bus Stops (Figure G1) on Atatürk Boulevard. A closed area has been created in order to protect the external factors and provide a more comfortable waiting area for the local people in hot / cold weather conditions. These stops have internet, air conditioning, book reading area, seating unit, route determining system and lighting feature. It is determined that the bus stops in Bilecik are appropriate in terms of aesthetics, visuals and functionality. The bus stop in Figure G3 is more primitive than the others and does not have a smart system. This type of bus stop has no informative infrastructure and wheelchair apparatus for the disabled.

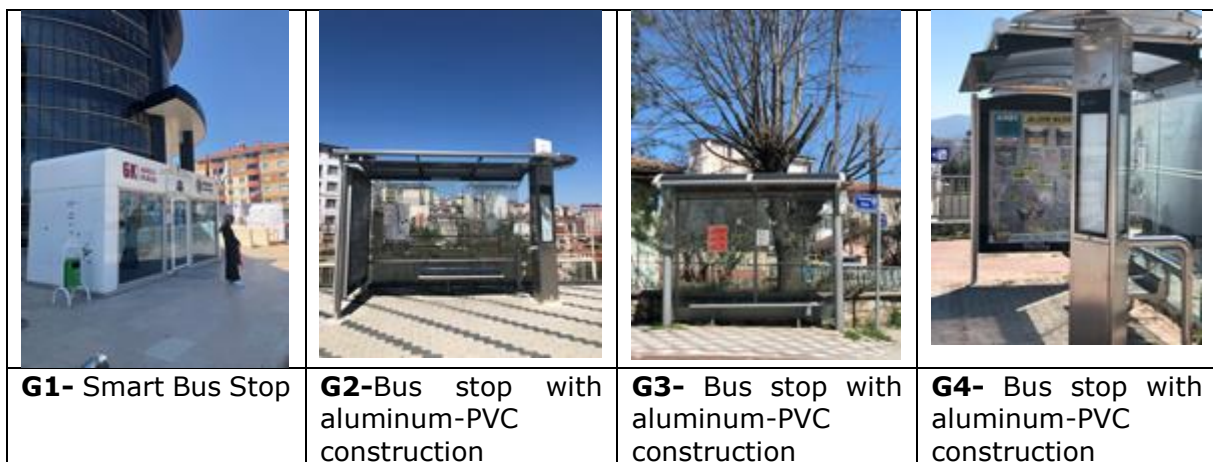


Figure 9. Examples of Bus Stops

- **Sales Units**

On the Ertuğrul Gazi Street, there are regional food and handicraft sales units (Figure H3) made by the Municipality. Wood was used as structural material in these units. The material used has been selected in accordance with the historical texture of the city and adds value to the city in terms of aesthetics and visuals. Sales kiosks consisting of metal and PVC combination (Figure H1) are located on the sidewalks, causing the pedestrian crossing area to narrow. In addition, since the main street of the city, Ertuğrul Gazi, is not a wide road, it also affects the traffic of vehicles parked for shopping from the kiosk. Traditional bagel sales units (H2) that circulate in the city are transferred to future generations as an indispensable part of our culture.



Figure 10. Examples of Sales Units

- **Artistic Objects**

Aesthetic values and artistic qualities are important in the formation of urban space. Urban objects are also important elements that add aesthetic value to urban space and make them more livable. On the other hand, works of art that will be placed in open spaces are also important for shaping social life and they also perform functions such as stimulating and mobilizing society (Düzenli, Mumcu 2017). The sculptures in the center of Bilecik do not reflect the city's history and traditional texture. Although there is a Faculty of Fine Arts and Design on the central campus of Bilecik Şeyh Edebali University, the competent authorities do not request support from the relevant faculty members regarding urban design, visual and aesthetic value and environmental regulation. University-institutions cooperation will be achieved with this cooperation protocol. Besides, works that will add value to the city in terms of aesthetics and artistry can be carried out.

The statue (Figure I1) positioned at the entrance intersection of the university campus and the statue (Figure I2) positioned at the organized industry intersection do not reflect the historical character and quality of the city and also does not have a visual and artistic value too. Based on the fact that Bilecik was the foundation of the Ottoman state, it is recommended to include artistic objects that reflect the identity and history of the city. The vertical garden applied on the wall of the gendarmerie building brought vitality to the city with its plant material. However, maintenance and repair work should be carried out to ensure its sustainability. The 100th Anniversary Wall (I4) built by the Municipality in Tevfikbey Street in 2019 were equipped with Turkey flag and photographs of the important events involving Mustafa Kemal Atatürk, the founder of the Republic. This area, which is among the interesting artistic objects for local people and guests, has been brought vitality with the use of plant materials.

			
I1- The statue at the University Crossroad	I2- Sculpture at the Organized Industrial Crossroad	I3- Vertical garden	I4- The 100th Anniversary Wall

Figure 11. Examples of Artistic Objects

J. Other Items (Trash cans, flowerpots, Planting, clock tower)

Other elements of urban furniture are complementary in the city. They are elements that contribute to the city aesthetically / functionally.

Trash cans in J1 and J2 figures undertake the same function, However they perceive aesthetically very different. The trash bin, which is a combination of wood and metal, has been painted in brown to match the wood and in addition to being functional, it is in harmony with the trees behind it. The green / white trash can with metal profile (Figure J2) is not aesthetically appropriate and is neglected. Concrete flowerpots (Figures J3 and J4) on Tevfik Bey street are functionally correctly used but are not in good quality. It is seen that the presence of flowers is missing and neglected. The wooden flower bed in the image J5 is in aesthetically and functionally good situation. The plant in the pot provides a natural look to the street by softening the hard image of the wall. Since *Pinus sp.* trees (Figure J6) on the sidewalk are tall, they are aesthetic and functional in terms of preventing pedestrian circulation and providing shade to people. On Figure J5, central refuge planting can be seen on Atatürk Boulevard. These trees absorb poisonous gases from their exhausts, cleans the air by holding dust particles. The clock tower (Figure J8), which reflects the history of the city of Bilecik, can be regarded as an aesthetic and functional city image. It has an aesthetic quality and positively affects the increasing tourism potential of the city.

			
J1- Wood-Metal combination trash can	J2- Metal trash can	J3- Concrete flower pot	J4- Concrete flower pot



Figure 12. Examples of Other Items

CONCLUSION AND RECOMMENDATIONS

Notwithstanding that the ecological conditions, historical development of the area, as well as the cultural and educational level of individuals, their aesthetical perspectives, use of materials that answer the needs of design objectives are recognized as a must for design and planning process, they are not deemed sufficient to create peaceful and livable spaces by themselves (Erdem 1995). For this reason, sustainable and purposive furniture must be designed and projected in urban areas as a whole by means of being enriched with such visual and aesthetical factors as style, color, texture etc., along with the plantal materials that meet the needs of users (Düzenli et al., 2017).

The related previous researches suggest that the furniture elements created during the design process are to ensure the formation of the identity of the area, along with the harmony with the architectural structure. Additionally, it is of vital importance to take the ergonomic characteristics of the users into consideration within the scope of furniture elements' designs. The furniture elements should be designed in accordance with the standards prescribed on international platforms.

Examining the urban furniture design on upper scale, it is required to be analyze the cultural and social profile of the city, as well as identifying the public areas and space usage needs of the society. Utmost attention should be laid on the whether the design and location of urban furniture elements that will be oriented at meeting the basic needs of citizens support the urban identity within the scope of the arrangement of public areas in the case study of Bilecik city.

Some of the most challenging problems in terms of using urban furniture elements can be summarized as difficulty of use, using materials of poor quality, unaesthetical images, due to design mistakes that do not satisfy the needs. Moreover, such problems as destruction and disorderly maintenance due to external factors and unconscious use lead to negative impacts on the usage, as well.

In conclusion, the historical areas, data that bridges the gap between the past and the future shaping with the cultural richness of a society are the cultural environments that survived to date with its architectural heredities, traditions and beliefs. In this context, Bilecik was the area where the seeds of Ottoman Empire were planted, thus having the responsibility to preserve and develop the environments reflecting this identity (T.R. Bilecik Governorship, 2020). The design of a new structure within a historical environment do not bear the same perspectives with the design of urban furniture within the same environment. Your new design is either in harmony with the environment, or it's not so, or – as another option – it copies the existing forms within the surrounding environment. It is a must for the urban furniture, which are projected to be used in historical areas, to be



in harmony with the identity of the environment in terms of form, color, texture and materials to be used.

Here we list the suggestions on this matter within the scope of our study:

- Maintenance – repair works should be carried out regularly in order to increase the quality of the furniture elements.
- The existing urban furniture elements should be re-evaluated based on the historical texture of the city. Where deemed required, those that are not in harmony should be removed.
- Sustainable materials should be used on the urban furniture elements in order to prevent vandalism.
- Instead of using a uniform style of furniture elements on urban areas, the furniture should be designed depending on the landscape characteristics and functionality that are reflected by the city, itself.
- A certain part of the urban furniture in Bilecik should be re-evaluated and designed in order to reflect the historical texture of the city.
- Metal coating, worn furniture elements that are not in harmony with the historical texture of the city should be either removed or subjected to recycling.

ACKNOWLEDGMENT

Survey-analysis of the study area was carried out by the authors in Autumn 2019 in Bilecik City. Also Photographs in the world examples section of the study were taken by the authors.

REFERENCES

- ACT Government, 2010. Design Standards for Urban Infrastructure 19 Street and Park. Edition 1.
- Aksu Ö V, 2012. Kent Mobilyaları Tasarımında Özgün Yaklaşımlar, İnönü Üniversitesi Sanat Ve Tasarım Dergisi, ISSN: 1309-9876 E-ISSN: 1309-9884, Cilt/Vol. 2 Sayı/No. 6 : 373-386.
- BEBKA (2018), T.C. Bursa Eskişehir Bilecik Kalkınma Ajansı, Doğa/Nature Bilecik, Seçil ofset.
- Bulut Y, Atabeyoğlu Ö ve Yeşil P 2008. Erzurum Kent Merkezi Donatı Elemanlarının Ergonomik Özelliklerinin Değerlendirilmesi Üzerine Bir Araştırma, Tarım Bilimleri Dergisi,14 (2) 131-138.
- Çoban E, Demir Z, 2014. Kent Mobilyalarının Buldukları Mekânlara Etkileri: Düzce Örneği, Düzce Üniversitesi Bilim ve Teknoloji Dergisi, 2 , 128-140.
- Demirtaş P. Ö., Bostancı, S. H. 2016. Kent Merkezlerinde Kent Mobilyalarının Tasarım Yaklaşımlarının Öğrenci Projeleri Üzerinden İncelenmesi, BJSS Balkan Journal of Social Sciences.
- Düzenli, T., Mumcu, S., Özkan, D. G., Alpak E.M. (2017). Peyzaj Mimarlığı Eğitiminde Kentsel Obje Tasarımlarının Sanatsal Açıdan incelenmesi. sed, 5 (1), s.57 -68
- Düzenli, T., Yılmaz, S., Özkan, D.G., 2017. Peyzaj Mimarlığı Eğitiminde Donatı-Mekan İlişkisinin Kurgulanması, The Journal of International Social Research, Volume: 10 Issue: 48.
- Erdem N 1995. Kentsel Donatı Elemanları, İstanbul Üniversitesi, Orman Fakültesi Dergisi, Seri B, Cilt 45, Sayı . 1-2.
- Erdoğan R, Oktay H E, Yıldırım C, 2011. Antalya-Konyaaltı Parklarında Kullanılan Donatı Elemanları Tasarımlarının Kullanıcı Görüşleri Doğrultusunda Değerlendirilmesi, Artvin Çoruh Üniversitesi Orman Fakültesi Dergisi, 12 (1):1-8.
- Ghorab, P. Yücel Caymaz, G.F. 2014. Evaluation of Street Furniture According to Design Principles. International Journal of Electronics and Mechatronics Engineering. Vol 4, No:3.
- Gupta, N. Bhatti, V. 2015. Importance of Street Furniture in Urban Landscape. International Journal of latest Trends in Engineering and Technology. Vol:5, Issue 3. ISSN: 2278-621X



- Güreman L 2011. Kent Kimliği Ve Estetiği Yönüyle Kentsel Donatı Elemanlarının Amasya Kenti Özelinde Araştırılması, e-Journal of New World Sciences Academy, Volume: 6, Number: 2, Article Number: 3C0073.
- İnceoğlu M. Aytuğ A. 2009. Kentsel Mekânda Kalite Kavramı, MEGARON, CİLT VOL. 4 - SAYI NO. 3, 131-146.
- Mumcu, S., Yılmaz, S., Düzenli, T., 2017. The Factors Related to the Design of Open Space Seating Furniture and Locations, Inonu University Journal of Art and Design, ISSN: 1309-9876, E-ISSN: 1309-9884 Cilt/Vol. 7 Sayı/No.15, 1-16.
- Nadim, Z. And Azani, M. (2016) Studying the Effect of Urban Furniture on Satisfaction of Domestic Tourists in Isfahan Bus Terminals. Open Journal of Geology , 6, 1032-1044.
- Najafidashtape A, 2018. Ulaşım Aktarma Merkezlerinde Akıllı Kent Mobilyaları, Journal of Architecture and Life, 13(1), (63-74), ISSN: 2564-6109, DOI: 10.26835/my.398502
- Neufert, E. (2013) Yapı Tasarımı, Çeviri: Çağla Özaslan, Beta Basın Yayım, İstanbul.
- Ocak A, Öztürk D and Kara İ. (2017). Bilecik Florası. Turkuvaz Haberleşme ve Yayıncılık, ISBN 978-605-65470-8-9.
- Rawan, A. H. Morsy, A. A. G. 2016. The Importance of Integrating Street Furniture in the Visual Image of the City. Journal of Modern Engineering Research. Vol: 9, Issue: 2
- Sağlık A., Sağlık E., Kelkit A., 2014. "Kentsel Donatı Elemanlarının Peyzaj Mimarlığı Açısından İrdelenmesi: Çanakkale Kent Merkezi Örneği", 1. Uluslararası Kentsel Planlama-Mimarlık-Tasarım Kongresi, Kocaeli, Türkiye, 8-11 Mayıs 2014, ss.1023-1035.
- T.C. Bilecik Valiliği, 2020. <http://www.bilecik.gov.tr/ilimizin-tarihcesi>
URL 1,2020. <https://www.tse.org.tr/Icerik/HaberDetay?HaberID=14565>
URL 2 (2019), <https://www.mgm.gov.tr/veridegerlendirme/il-ve-ilceler-istatistik.aspx?m=BILECIK>
- Yaylalı, S. 1998. Kent Mobilyaları Kavramında Kullanılabilecek Kavramsal Bir Model, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Y.Lisans Tezi, İstanbul.
- Yıldızcı, A. C. (2001). "Kent Mobilyaları Kavramı ve İstanbul'daki Kent Mobilyalarının İrdelenmesi", I. Uluslararası Kent Mobilyaları Sempozyumu, Bildiriler Kitabı, s.29-34.
- Yörük, İ., Gülgün, B., Sayman, M., Ünal Ankaya, F., 2006. Peyzaj Planlama Çalışmaları Kapsamında Ege Üniversitesi Kampüs Örneğindeki Peyzaj Donatı Elemanlarının Ergonomik-Antropometrik Açından İrdelenmesi, Ege Üniv. Ziraat Fak. Derg., 2006, 43(1):157-168, ISSN 1018-8851.
- Yücel, G. F. 2013. Street Furniture and Amenities: Designing the User-Oriented Urban Landscape. Advance in Landscape Architecture, Chapter 23, INTECH.
- Zavari, Z., NangkulaUtberta, MdAzreeOthumanMydin, MdAzreeOthumanMydi, 2016, Sustainability Of Street Furniture Design In Malaysia. Aust. J. Basic & Appl. Sci., 10(6): 119-121