

Urban Furniture for Atatürk University Campus: Design Processes and **Evaluations**

ABSTRACT

This study aims to comprehensively evaluate the urban furniture designed by interior architecture students for the Atatürk University campus. The primary goal of the study is to develop a multi-faceted approach in the design process of urban furniture by considering regional characteristics. In this context, a literature review was first conducted to meticulously determine the criteria for urban furniture design, and the workshop studies and design processes of the students were examined in detail within these criteria. The urban furniture designs developed by five different groups were evaluated based on critical criteria such as functionality, ergonomics, aesthetics, material selection, and socio-cultural harmony. The evaluations revealed that while the students' designs were generally found to be successful, some groups particularly struggled with socio-cultural harmony and aesthetic coherence. These findings underscore the importance of regional and cultural context in the design processes. The study emphasizes that urban furniture design in interior architecture education should not be limited to functionality and aesthetics but should also be integrated with regional and cultural elements. In this regard, the study aims to guide students in designing from a broader perspective and to help them develop a more comprehensive approach. It is expected that future studies will further enhance this awareness, encouraging students to prioritize cultural sensitivity in their designs.

Keywords: Urban Furniture, Interior Architecture, Campus, Furniture Design.

Firdevs Kulak Torun ¹ How to Cite This Article
Kulak Torun, F. & Torun, A. (2024). "Urban Furniture for Atatürk University Campus: Design Processes and Evaluations", International Social Mentality and Researcher Thinkers Journal, (Issn:2630-631X) 10(5): 731-742. DOI: https://doi.org/10.5281/zenodo. 13844369

Arrival: 23 June 2024 Published: 30 September 2024

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INTRODUCTION

A city is a densely populated settlement area in which the community's various needs—such as shelter, residence, transportation, work, rest, and entertainment—are met, and it is in a state of continuous social development (Keleş, 1998). Cities have also been defined as large, dense, and permanent settlements (Wirth, 1938). Another definition explains that cities emerged after the Neolithic revolution, gradually spread worldwide, grew, evolved, and became a universal phenomenon (Baumont and Huriot, 1998). Cities have also been described as the product of a historical process formed by the interplay of social, cultural, geographical, and economic factors (Khakpour et al., 2014). Moreover, cities are dynamic structures where architectural and urban identities are constantly changing (Kandemir, 2017).

Urban spaces, which constitute cities, have been defined as areas that develop and change over time based on the community's socio-economic and cultural structure, resulting from collective living or the fulfillment of personal needs (Özaydın et al., 1991). Urban spaces are shaped by a complex structure composed of parcels, buildings, blocks, and neighborhoods (Vanegas et al., 2010). These spaces are expected to meet functional requirements and possess visual quality (Lapintie, 2007). Additionally, they are spaces intended for social interaction, sociability, and community activities (Johnson and Glover, 2013).

One of the most crucial components of urban space is urban furniture. Urban furniture has contributed to the development of cities throughout history. This is because urban furniture plays a significant role in the formation of elements such as communication, aesthetics, and functionality, helping to organize urban life (Uslu and Bölükbaşı, 2019). Urban furniture encompasses various elements, including bus stops, signage, playgrounds, billboards, trash bins, benches, and more. These elements are responsible for meeting users' needs while ensuring order and aesthetics (Noori, 2012).

Urban furniture refers to the publicly accessible equipment used in city streets and open spaces, helping to make urban life more comfortable and aesthetically pleasing. Urban furniture should be durable and comfortable, designed to meet the preferences and expectations of users (Grabiec et al., 2022). Additionally, urban furniture should be uniquely designed to reflect the characteristics of the cities to which they belong.

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They need to provide continuity and maintain harmony with their surroundings to ensure cohesion. This enhances their perception and interpretation, making them more functional (Bingöl, 2017).

The design of urban furniture requires a different approach than typical furniture design. This is because, in addition to meeting user desires and demands, urban furniture must also harmonize with the city and region it belongs to. Based on this premise, the objective of this study has been defined. The aim of the study is to raise awareness among interior architecture students about designing urban furniture, which is a prominent component of urban spaces, by considering the characteristics of the city it belongs to in a multifaceted manner. Additionally, the study aims to encourage students to think multidimensionally while designing urban furniture, taking into account design principles.

Students from the Interior Architecture Department of Atatürk University's Faculty of Architecture and Design designed urban furniture for the Atatürk University campus over a four-week period as part of their course. The urban furniture designed during this project has been selected as the sample for this study. Through literature reviews, urban furniture design criteria were identified. In the evaluation section of the study, these design criteria were compared and analyzed with the urban furniture designs from Atatürk University included in the sample. In the conclusion section, the data obtained from the evaluations were presented. This study demonstrated to students, through hands-on experience, that designing urban furniture within the scope of interior architecture education requires attention to various perspectives and different criteria.

Methodology

Multiple methods were utilized in this study. The first method employed was a literature review. Through this literature review, the principles of urban furniture design were established. The research conducted on this topic was compiled and explained under the relevant section. Another method used in the study involved workshops with students as part of the fieldwork. During this process, the students' research, sketches, and drawings related to urban furniture design were examined. Necessary critiques were provided to facilitate the progression of the designs. The completed designs were collected after four weeks. In the evaluation section of the study, the design criteria obtained from the literature review were compared and analyzed against the urban furniture designs included in the sample. The methods used in the study are summarized in Figure 1.

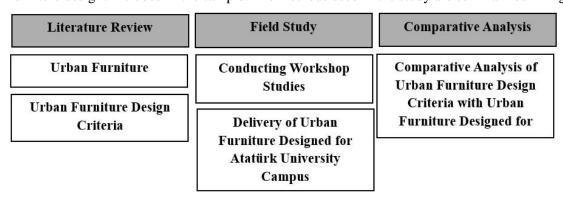


Figure 1. Methods Used in the Study

URBAN FURNITURE AND DESIGN PRINCIPLES

Urban furniture refers to design products that facilitate public life for users by providing seating, protection, lighting, communication, and other functions in streets, avenues, roads, pedestrian pathways, and squares, as well as in general and private recreational spaces. These products contribute to the creation of functional and safe environments in both interior and exterior spaces (Aksu, 2012). Urban furniture should be an integral part of the city, evoke the characteristics of the area in which it is located, enhance the surrounding environment, meet the needs of users, and be reliable, healthy, and protective (Akyol, 2006).

Urban furniture, which facilitates people's lives and serves various functions, has been classified in different ways. In her study, Bilen Öner (2004) classified urban furniture into four groups based on the types of usage and their physical counterparts in general practice: those with temporary usage, such as curb shaping and paving; those with continuous usage, such as seating units and bus stops; those with functional usage, such as fountains and information boards; and those with auxiliary usage that supports activities related to the other three groups, such as waste collection and railings. Yıldızcı (2001) categorized urban furniture according to their types as follows: ground coverings, seating units, lighting elements, signs and information boards, barriers, water features, canopy elements, sales units, artistic objects, playground equipment, and other elements. Güner (2015) classified urban furniture based on their functions, including protection, information provision, signaling, decoration, shelter, entertainment, play and relaxation, and shopping purposes. Akyol

(2006) divided urban furniture into those that are infrastructure-dependent and those that are not. Infrastructure-dependent urban furniture includes lighting elements, information and signage panels, telephone booths, public transport stops, public clocks, water features, and sales units. Non-infrastructure-dependent urban furniture includes ground coverings, trash bins, planters, canopy elements, tree guards, bicycle racks, playground equipment, and plastic art objects.

Urban furniture consists of many elements, and the classification of these elements varies. However, when designing urban furniture, it is crucial that all these elements are integrated into a coherent design language. Therefore, studies on this topic have established certain design criteria for urban furniture. Aksu (2012) identified the design criteria for urban furniture as functionality, aesthetics, form, material, color, texture, and perceptibility. Akyol (2006), on the other hand, defined the criteria as functionality, usability, ergonomics, safety, maintenance, quality, and durability.

Paryabi (2015) emphasized in his study that the primary purpose of urban furniture is to meet the needs of users. Therefore, he highlighted the importance of functionality and usability in the design of urban furniture, particularly for elements with functions such as seating, resting, waiting, and information gathering, stressing the need for ergonomic design. Ghorab and Caymaz (2014) argued that urban furniture should achieve overall aesthetic harmony with its surroundings through its color, shape, and materials. This underscores the importance of aesthetics and visual coherence in urban furniture design. Grabiec et al. (2022) explained that urban furniture should be durable against outdoor conditions, emphasizing the need for using long-lasting materials. This statement highlights the importance of durability and material selection as crucial criteria in urban furniture design. Allahdadi (2017) emphasized that the design of urban furniture should be in harmony with the social and cultural characteristics of the region and community in which it is located. He argued that this would lead to greater acceptance and more active use of urban furniture by users, explaining the significance of social and cultural compatibility in urban furniture design. Jia-qing and Li (2011) noted in their studies that eco-friendly materials should be used in urban furniture design, emphasizing the necessity of selecting ecological and sustainable materials in the design of urban furniture.

After conducting the literature review, principles for urban furniture design were identified for use in this study. The determined criteria include functionality, perceptibility, social and cultural compatibility, material selection, ergonomics, and aesthetics. Within the scope of the functionality criterion, the ability of urban furniture to meet the needs of users was established as an evaluation phase. The perceptibility criterion will examine whether the furniture can be noticed and utilized by users without disrupting the urban fabric. The social and cultural compatibility criterion was identified as a measure to assess the relevance of the furniture to the local characteristics of Atatürk University campus. Material selection was determined as a criterion considering the use of urban furniture in outdoor spaces and its harmony with the region. Ergonomics was established as a criterion to ensure the safe use of urban furniture, just as it is with all types of furniture. The aesthetics criterion was determined to ensure that the furniture contributes to the overall visual appeal of the city.

STUDY OF FIELD

Atatürk University, located in Erzurum, Turkey, is a well-established institution founded on June 7, 1957. The university comprises 23 faculties, 13 vocational schools, and 2 higher education schools, spread across various campus locations. The main campus has been identified as the site for the design of urban furniture within the scope of this study. In addition to housing numerous faculties, institutes, and vocational schools, the main campus includes administrative buildings, dining facilities, shopping units, libraries, places of worship, and structures catering to the needs of students and staff, such as banks, restaurants, cafes, residential areas, and a research hospital (Url-1, 2024).

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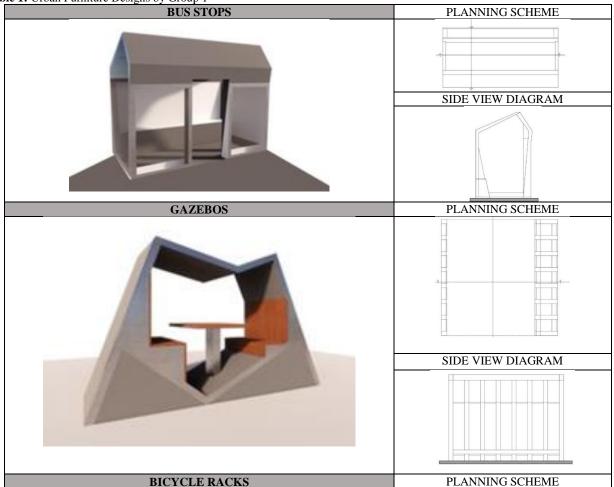
Photo 1. Atatürk University Main Campus

Source: Url-2, 2024.

As part of the study, urban furniture designs were created for the main campus. Before starting these designs, discussions were held with both the users and the students, who were the designing group, to emphasize important considerations. Following these discussions, several decisions were made, including the need for bus stops to be more sheltered due to the cold climate of the region, the necessity of creating collective seating areas for socialization while considering weather conditions, and the importance of drawing inspiration from elements unique to the city during the design process. Subsequently, within the scope of urban furniture, bus stops, bicycle racks, seating units, and gazebos were designed. Upon the completion of the study, the urban furniture designs from five groups were submitted.

The first group chose the winter season as their source of inspiration. They incorporated the harsh and sharp lines characteristic of winter into their designs. The materials predominantly used in the urban furniture were wood and metal. The designs created by the first group are presented in Table 1.

Table 1: Urban Furniture Designs by Group 1

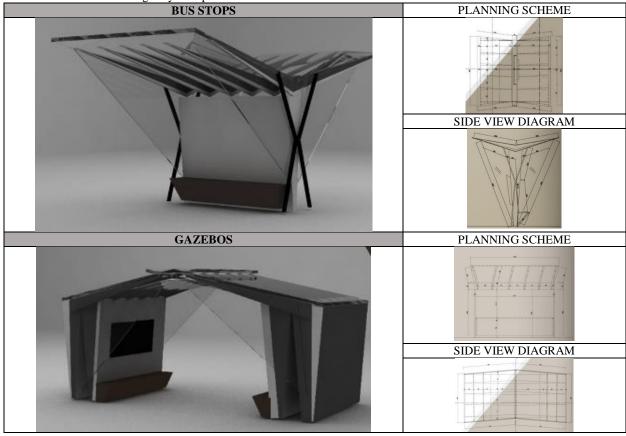


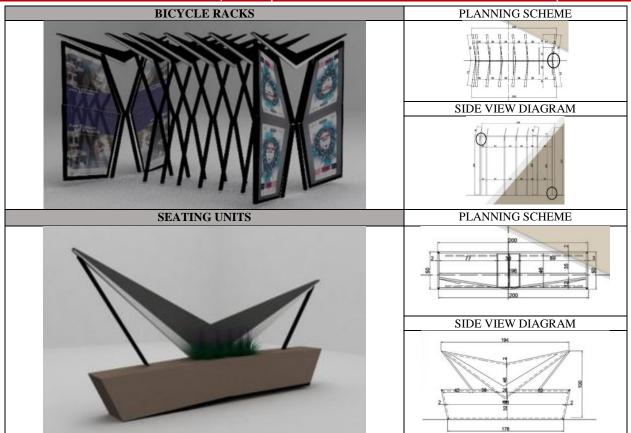
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Group 2 used the city of Erzurum and the double-headed eagle, one of the symbols of Atatürk University, as their starting point for their designs. They abstracted the eagle's wings and incorporated this concept into their designs. The group utilized wood and metal as the primary materials for their urban furniture designs. Group 2's urban furniture designs are presented in Table 2.

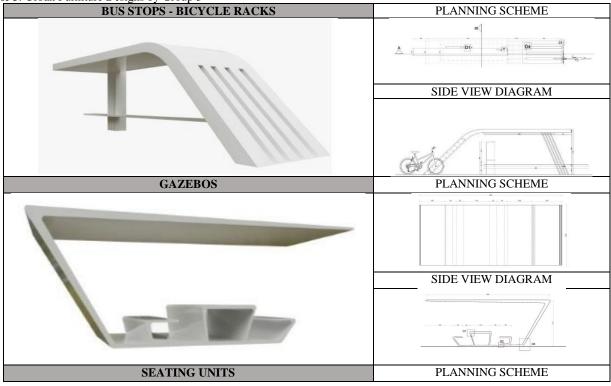


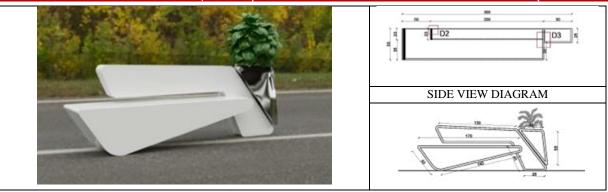




Group 3 took the history of Erzurum as their starting point for their designs. Drawing inspiration from the city's historical fabric, they chose Seljuk motifs as their source of inspiration for their urban furniture designs. These motifs were abstracted and integrated into their designs with modern lines. The group primarily used wood as the material for their urban furniture designs. The urban furniture designs created by Group 3 are presented in Table 3.

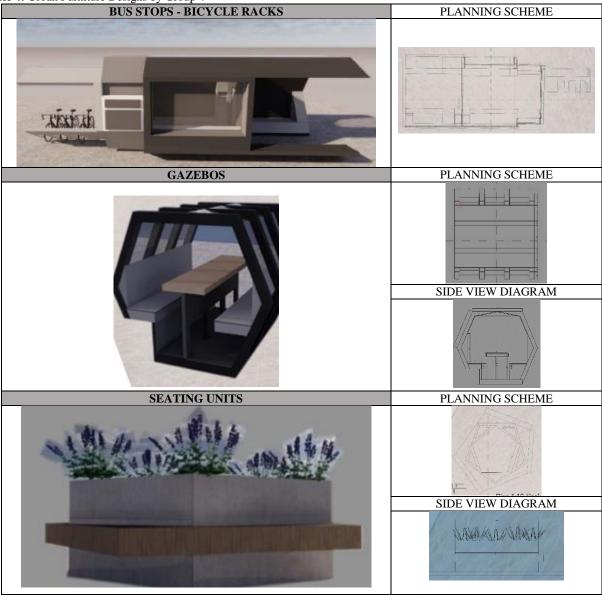
Table 3: Urban Furniture Designs by Group 3



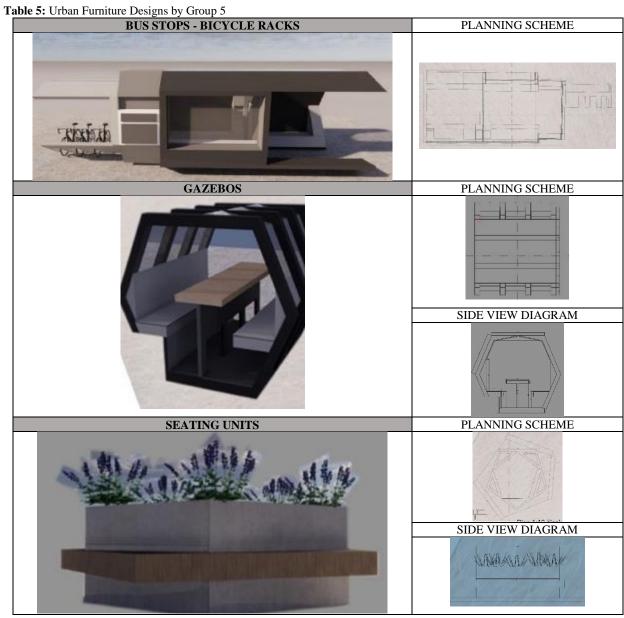


Group 4 selected the swallowtail roof, a feature commonly found in traditional Erzurum houses, as the starting point for their designs. They used materials such as glass, steel, and wood in their urban furniture designs. The urban furniture designs created by Group 4 are presented in Table 4.

Table 4: Urban Furniture Designs by Group 4

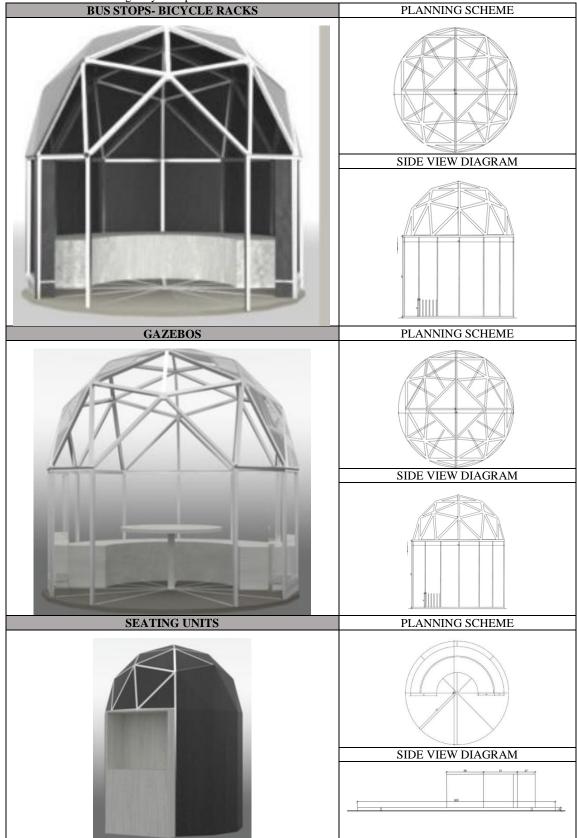


Group 5 used Palandöken Mountain, one of the significant symbols of Erzurum, as their source of inspiration. They incorporated the mountain's jagged lines into their designs. The materials used in their urban furniture designs included skis, glass, steel, and wood. The urban furniture designs created by Group 5 are presented in Table 5.



Group 5 used Palandöken Mountain, one of the significant symbols of Erzurum, as their source of inspiration. They incorporated the mountain's jagged lines into their designs. The materials used in their urban furniture designs included skis, glass, steel, and wood. The urban furniture designs created by Group 5 are presented in Table 5.

Table 5: Urban Furniture Designs by Group 5



EVALUATION

The urban furniture designs of the five groups included in the sample were evaluated in two stages. In the first stage, the focus was on whether the students paid attention to the criteria that were continuously emphasized during the course. In the second stage, an evaluation was conducted based on the criteria that should be present in urban furniture, as identified through the literature review.

During the course, it was emphasized that the chosen source of inspiration for the design of urban furniture should be an element that symbolizes the region. It was also stressed that the designed urban furniture should maintain a consistent design language within itself. Additionally, the importance of designing more protective furniture considering the cold climate was highlighted. The evaluation of these three criteria, which were persistently emphasized throughout the process, and the final products are presented in Table 6.

Table 6: Comparison of Course Criteria and Final Products

Course Criteria	Group 1	Group 2	Group 3	Group 4	Group 5
Symbolizes the Region	-	-	+	-	+
Consistent Design Language	-	-	+	-	+
Suitable for the Climate	+	-	-	+	+

All groups made an effort to design urban furniture that symbolizes the region. Their starting points were selected from elements that are symbols of the city and the university. However, considering the awareness that the final products would be placed within the campus, it was determined that Groups 3 and 5 produced furniture that effectively symbolizes the region. In terms of maintaining a consistent design language among the furniture, it was observed that only Groups 3 and 5 paid attention to this aspect. The other groups, however, struggled to maintain such consistency. Regarding the suitability of the urban furniture for the climate, it was found that Groups 2 and 3 did not adequately consider the necessary conditions. The other groups, on the other hand, incorporated this aspect into their designs.

The second evaluation step was carried out by considering the principles of urban furniture design obtained from the literature review. The principles addressed include functionality, visibility, social and cultural harmony, the selection of eco-friendly materials, and ergonomics. The results of the evaluation are presented in Table 7.

Table 7: Comparison of Urban Furniture Design Principles with Final Products

Urban Furniture Design	Group 1	Group 2	Group 3	Group 4	Group 5
Principles					
Functionality	+	+	+	+	+
Visibility	+	+	+	+	+
Social and Cultural	-	-	+	-	-
Compatibility					
Material Selection	+	+	+	+	+
Ergonomics	+	+	+	+	+
Aesthetics	-	-	+	-	+

All groups successfully met the criteria for functionality and visibility, as the urban furniture designs were clearly defined for the students, and the products were purposefully designed to meet the needs. The characteristic of being socially and culturally compatible, however, was not achieved by every group. Only Groups 3 and 5 successfully demonstrated this compatibility when considering both their design inspiration and the final product. Regarding material selection, all groups chose environmentally friendly materials, which is positive. However, it should be noted that none of the groups specifically mentioned the compatibility of their selected wooden materials with the local climate conditions. The ergonomics criteria were met by all groups, ensuring that the designs are user-friendly. Aesthetics, on the other hand, were only effectively addressed by Groups 3 and 5. This is because the urban furniture pieces in the other groups lacked harmony and coherence with each other.

CONCLUSION

In this study, various urban furniture designs were developed for the Atatürk University campus to encourage interior architecture students to think multidimensionally and consider regional characteristics in the design process. The evaluations revealed that the students generally adhered to the established criteria in their design processes, though some groups exhibited deficiencies in specific areas. The results obtained are summarized as follows:

- ✓ The Selection and Transfer of Inspiration: In designing urban furniture that symbolizes the region, it is crucial to choose an appropriate source of inspiration. However, selecting the source of inspiration alone is not sufficient; how this inspiration is reflected in the design is also of great importance. The chosen inspiration must be integrated into the design in a manner that is harmonious with the region.
- ✓ Harmonious Design: Urban furniture must be designed in a coherent language both within themselves and with each other. This not only ensures the aesthetic integrity of the designs but also positively impacts the user experience.

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- ✓ Climate-Appropriate Design: In a region with harsh climatic conditions like Erzurum, urban furniture must be designed to withstand these conditions. Students should consider the climate in their furniture designs and develop sheltered and durable solutions accordingly.
- ✓ Functionality, Ergonomics, and Perceptibility: From the outset, the groups focused on the functionality, ergonomics, and perceptibility of the furniture. These features were successfully implemented by all groups, and it was observed that the designs effectively met user needs.
- ✓ Social and Cultural Compatibility: The reflection of social and cultural characteristics in the design is directly related to symbolizing the region. Proper integration of the chosen source of inspiration into the design plays a critical role in achieving social and cultural harmony.
- ✓ Material Selection: The choice of environmentally friendly materials is significant for sustainable design. However, the suitability of the selected materials to the region's climatic conditions must also be considered. In this context, material selection should take into account the climate and environmental factors.
- ✓ Aesthetic Integrity: Designing urban furniture as a cohesive set strengthens the aesthetic integrity of the designs. However, it has been observed that groups that did not pay attention to this aspect were found to be aesthetically weaker.

In conclusion, this study demonstrates the significance of encouraging interior architecture students to consider regional characteristics in urban furniture design and to think in a multidimensional manner. Future studies are expected to further enhance students' awareness in this area and foster a more comprehensive approach to urban furniture design. Consequently, students will be better equipped to consciously address critical elements such as aesthetics, functionality, ergonomics, and socio-cultural harmony in their designs.

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