Erciyes University Journal of Institue Of Science and Technology

Research Article
10.65520/erciyesfen.1921462

Imprint:
Volume: 42(2)
Year: 2026
Page: 669-683

Öznur ZENGİN[a]
Eda ŞENTÜRK[b*]
Pervin YEŞİL[c]

[a] Master's Student, Ordu University, oznur.z@icloud.com
[b] Master's Student, Ordu University, edasenturk653@gmail.com
[c] Prof., Ordu University, perviny48@gmail.com

* Corresponding Author

Received: 4/2/2026
Accepted: 6/25/2026

Citation:
Öznur ZENGİN, Eda ŞENTÜRK, Pervin YEŞİL (2026). Evaluation of Samsun Batı Park in Line with Diversity of Use and Universal Design Principles. *Erciyes University Journal of Institue Of Science and Technology*, 42(2), 669-683. https://doi.org/10.65520/erciyesfen.1921462

Screened by iThenticate for Authors & Researchers

Except where otherwise noted, content in this article is licensed under a Creative Commons 4.0 International license. Icons by Font Awesome.

Evaluation of Samsun Batı Park in Line with Diversity of Use and Universal Design Principles

Abstract

Urban parks are essential public open spaces that meet the needs for recreation, socialization, and interaction with nature, and cater to diverse user profiles. Ensuring that these spaces can be used equally and independently by all individuals requires the integration of universal design and accessibility principles into the planning process. This study aims to evaluate Samsun Batı Park in terms of universal design principles and diversity of use. In the study, the urban amenities and spatial components within the park were examined based on field observations; a tabular method based on a "suitable/unsuitable" classification was applied in accordance with universal design principles, TSE 12576 standards, and criteria for diversity of use. The findings indicate that the park's overall suitability level is approximately 72%. While its large open spaces, multi-functional recreational opportunities, and accessibility via public transportation stand out as strengths; ergonomic deficiencies in some facilities, slope issues on ramps, and limited wayfinding systems were identified as key shortcomings. In conclusion, this study reveals that Samsun Batı Park has areas that need to be developed in accordance with universal design principles. The evaluation approach presented is expected to provide a applicable framework for similar studies aimed at determining the accessibility and inclusivity levels of urban parks.

Keywords: Accessibility, Ergonomics, Universal Design, Urban Park, Street Furniture.

Samsun Batı Park Kullanım Çeşitliliği ve Evrensel Tasarım İlkeleri Doğrultusunda Değerlendirilmesi

Öz

Kent parkları; rekreasyon, sosyalleşme ve doğayla etkileşim gereksinimlerini karşılayan, farklı kullanıcı profillerine hitap eden temel kamusal açık alanlardır. Bu alanların tüm bireyler tarafından eşit ve bağımsız biçimde kullanılabilmesi, evrensel tasarım ve erişilebilirlik ilkelerinin planlama süreçlerine entegrasyonunu gerektirir. Bu çalışma, Samsun Batı Park'ın evrensel tasarım ilkeleri ve kullanım çeşitliliği açısından değerlendirilmesini amaçlamaktadır. Çalışmada parkta yer alan kentsel donatılar ve mekânsal bileşenler alan gözlemlerine dayalı olarak incelenmiş; evrensel tasarım ilkeleri, TSE 12576 standartları ve kullanım çeşitliliği ölçütleri doğrultusunda "uygun/uygun değil" sınıflandırmasına dayalı tablolu bir yöntem uygulanmıştır. Bulgular, parkın genel uygunluk düzeyinin yaklaşık %72 olduğunu göstermektedir. Geniş alanlara sahip olması, çok işlevli rekreasyon olanakları ve toplu taşımayla erişilebilirliği güçlü yönler olarak öne çıkarken; bazı donatıların ergonomik yetersizlikleri, rampalardaki eğim sorunları ve sınırlı yönlendirme sistemleri temel eksiklikler olarak belirlenmiştir. Sonuç olarak bu çalışma, Samsun Batı Park'ın evrensel tasarım ilkeleri doğrultusunda geliştirilmesi gereken yönler

bulunduğunu ortaya koymaktadır. Ortaya konulan değerlendirme yaklaşımının, kentsel parkların erişilebilirlik ve kapsayıcılık düzeylerinin belirlenmesine yönelik benzer araştırmalar için uygulanabilir bir çerçeve sunması beklenmektedir.

Anahtar kelimeler: Evrensel Tasarım, Ergonomi, Erişilebilirlik, Donatı Elemanları, Kentsel Park.

1. INTRODUCTION

The acceleration of urbanization and the resulting increase in population density are steadily increasing the need for urban parks. Urban parks are regarded as public open spaces that aim to balance the environmental, social, and psychological pressures of urban life and address the multifaceted needs of individuals through various spatial units and urban amenities (20). This multifaceted function of public spaces is directly related not only to the existence of the space itself but also to users' ability to access, perceive, and safely use the space (1). Although there are various definitions of urban parks in the literature, there is a common consensus that the primary function of these spaces is to enhance the quality of urban life (2,21).

Amid the hustle and bustle of urban life, city parks serve as vital recreational spaces that meet individuals' needs for rest, socialization, and rejuvenation. According to Atanur (2020), city parks are multifunctional public spaces where individuals can connect with nature while also fulfilling their sociocultural needs (3). Similarly, Csomos et al. (2023) note that urban parks encourage physical activity, provide an aesthetic environment, and have positive effects on individuals' psychosocial, cognitive, and emotional perceptions. In this regard, urban parks are among the key components of urban life in terms of reducing mental fatigue, alleviating stress, and supporting memory development (4). Furthermore, when planning and management processes are addressed with a holistic approach, urban parks support ecological balance, contribute to the conservation of flora and fauna, and add economic and social value to the city.

Universal design, which forms the theoretical foundation of this approach, aims to create spaces that are accessible and usable by everyone, regardless of physical, mental, or cultural differences. Principles such as equal access, flexibility of use, simple and intuitive use, perceptible information, error tolerance, low physical effort, and provision of sufficient space for approach and use form the fundamental framework of universal design (5, 6, 7, 10). Design approaches developed in line with these principles aim to ensure that public spaces provide safe and independent use for all individuals without segregating users.

Ergonomics emerges as a key determinant in the functional and user-centered application of these principles in public spaces. Ergonomics is an interdisciplinary field that examines the interaction between humans and their environment and aims to adapt the physical environment to the user (8, 9). Urban amenities designed in accordance with anthropometric criteria and ergonomic standards enable users to utilize the space in a more comfortable, safe, and independent manner (22).

Despite the growing emphasis on accessibility in urban open space research, studies that evaluate urban parks simultaneously in terms of universal design principles and diversity of use remain limited. Since urban parks serve users with different ages, abilities, and recreational expectations, evaluating both accessibility and usage diversity together provides a more comprehensive understanding of spatial performance. Therefore, this study aims to evaluate Samsun Batı Park according to universal design principles, TSE 12576 accessibility standards, and diversity of use criteria. By identifying both strengths and deficiencies of the park, the study seeks to contribute to the development of more inclusive urban parks and to provide an applicable evaluation framework for similar urban open spaces.

CC: BY-NC-ND

2. MATERIALS AND METHODS

2.1. Material

The study area consists of Samsun West Park, which covers an area of 500 decares.The study area is located within the boundaries of the İlkadım district of Samsun Province, at coordinates approximately 41°19′18.7″N latitude and 36°19′28.8″E longitude. Samsun Batı Park serves as one of the city's key recreational areas where residents of Samsun spend their leisure time.

The park is located along the main Samsun–Atakum transportation corridor; it is bordered by the Ondokuz Mayıs University Faculty of Fine Arts Campus to the east and the Samsun Sailing Club to the west. Thanks to this location, the park serves as a public open space that is easily accessible from both the city center and the Atakum direction. Its proximity to public transportation routes and pedestrian-friendly design enable the area to be heavily utilized by diverse user groups.

Samsun Batı Park has been designed as a multifunctional open green space featuring walking and running paths, bike lanes, children's play areas, sports fields, seating areas, green spaces, and various urban amenities. This spatial diversity enables the park to be used by people of different age groups and physical abilities; in this regard, the space serves as a suitable example for evaluation in terms of universal design principles and diversity of use (Figure 1).

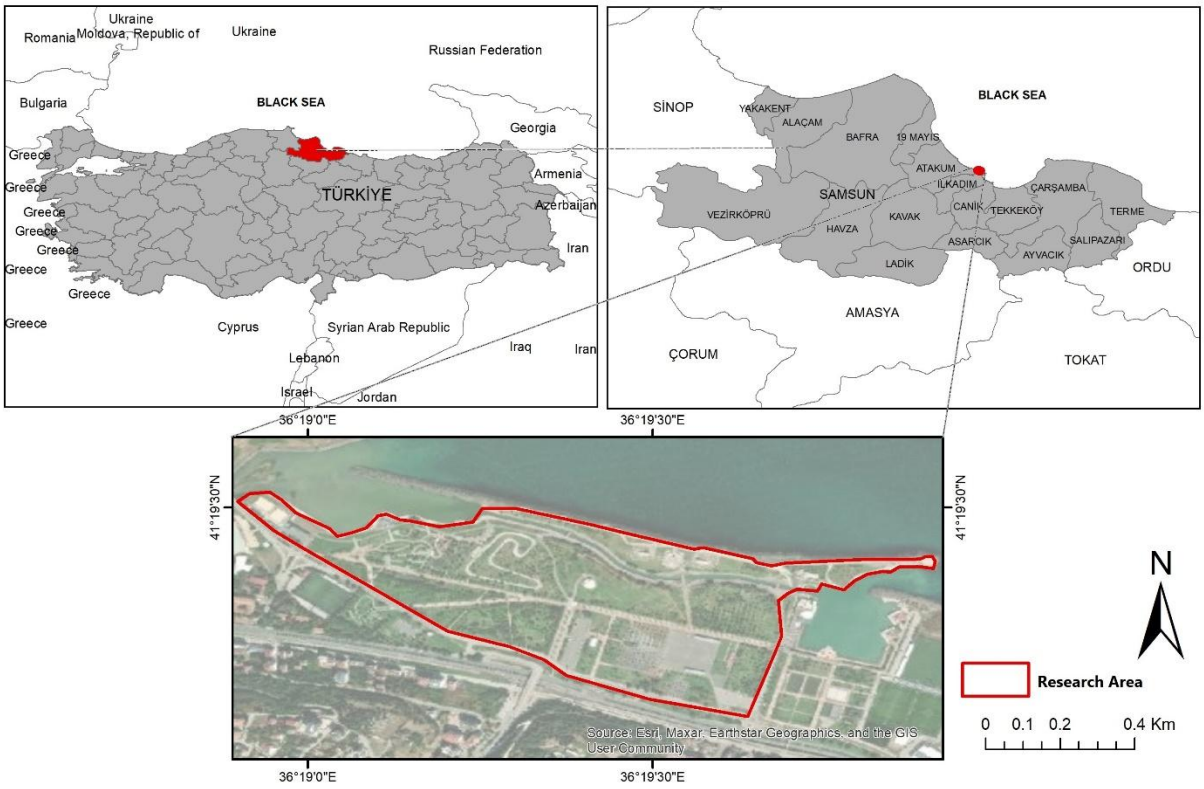


Figure 1. Research area

2.2. Method

This study was conducted using systematic field observation and a criteria-based evaluation approach, which are qualitative research methods. The research process was designed to assess the extent to which universal design principles and accessibility standards are implemented in urban open green spaces. Samsun Batı Park, selected as the study area, serves as a suitable case study due to its spatial diversity and the infrastructure that caters to various user groups.

The study was conducted in three main phases. In the first phase, urban amenities and spatial components within the park area were examined using on-site observation methods. Within this

scope, pedestrian paths, ramps, stairs, seating elements, children's play areas, sports areas, wayfinding and informational elements, lighting elements, and open green space arrangements were included in the assessment. During the site observations, the locations, physical characteristics, continuity of use, and user movements of the facilities were taken into account; observations were conducted at different times of the day to create a comprehensive dataset regarding the area's overall usage profile.

In the second phase, evaluation criteria were established. Accordingly, the study considered:

(I) universal design principles,

(II) TSE 12576 – Accessibility rules for urban roads, sidewalks, and crosswalks,

(III) criteria for diversity of use.

Within the scope of universal design, the principles of equal use, flexibility of use, simple and intuitive use, perceptible information, error tolerance, low physical effort, and providing sufficient space for approach and use formed the basis of the evaluation. The TSE 12576 standard has been referenced specifically for the accessibility assessment of circulation areas, ramps, stairs, and surface characteristics. Additionally, the park's potential for use by users of different age groups, physical ability levels, and recreational expectations has been included in the evaluation under the heading of "usage diversity."

In the third stage, a tabular evaluation method was applied in accordance with the established criteria. In the evaluation table, which was created based on the evaluation indicators used in the study by Ergen et al. (2025), the park's current status for each indicator was classified as either "appropriate" or "inappropriate" (11). This approach aims to ensure that criteria are addressed objectively during the evaluation process and that the area's strengths and areas for improvement are clearly identified. The tabular evaluation method also provides a framework that enables comparative analysis with other urban open spaces.

The data collected as part of the study were analyzed using descriptive analysis methods; the current status of Samsun Batı Park was evaluated using a holistic approach in terms of universal design principles, accessibility standards, and diversity of use.

2.3. Ethical Approval Ethical approval is not required for this study.

3. RESULTS

The findings obtained from the field observations were evaluated under the main categories of recreational areas, seating units, lighting elements, garbage bins, stairs, ramps, bridges, and wayfinding-information signs. These urban amenities and spatial components were examined in terms of accessibility, ergonomic suitability, compliance with universal design principles, and diversity of use criteria. Samsun Batı Park contains a wide range of recreational and social facilities, including walking and cycling paths, children's playgrounds, sports areas, seating and resting areas, picnic and barbecue areas, green open spaces, and a go-kart track (Figure 2). (Figure 2).

CC: BY-NC-ND



Figure 2. Batı Park recreational areas

The seating units located in the park were examined in accordance with ergonomic criteria and accessibility standards. The study included an evaluation of seven different types of seating units found in the park. The height, width, length, backrest, and material properties of the seating units were analyzed based on TSE standards and ergonomic measurements recommended in the literature (Table 1).

It is observed that the height and seat surface dimensions of a large proportion of seating units fall within the recommended range. In particular, seating heights in the 40–45 cm range and seating widths in the 38–42 cm range are considered appropriate for user comfort. This indicates that some seating elements in the park meet ergonomic usage conditions. Additionally, it was determined that the table height and width measurements for seating units used with tables generally comply with standards.

Table 1. Characteristics of the seating units in Batı Park

Photos	Feature	Recommended Value	Measured Value	Suitability
	Seat Height	41cm – 46 cm (19)	40 cm	Suitable
	Seat Width	38.70 cm and a maximum of 43.36 cm	40 cm	Suitable
	Table Height	90 cm	90 cm	Suitable
	Table Width	60 cm	120 cm	Suitable
	Material Used	Free	Wood, concrete	Suitable
	Seat Height	41cm – 46 cm (19)	50 cm	Not Suitable
	Seat Width	38.70 cm and a maximum of 43,36 cm	55 cm	Not Suitable
	Backrest Height	70 cm	120 cm	Not Suitable
	Length	120 cm and above	150 cm	Suitable
	Material Used	Free	Concrete	Not Suitable
	Seat Height	41cm – 46 cm (19)	45 cm	Suitable
	Seat Width	38,70 cm and a maximum of 43,36 cm	40 cm	Suitable
	Backrest Height	70 cm	70 cm	Suitable
	Length	120 cm and above	120 cm	Suitable
	Material Used	Free	Wood	Suitable
	Seat Height	41cm – 46 cm (19)	45 cm	Suitable
	Seat Width	38.70 cm and a maximum of 43.36 cm	40 cm	Suitable
	Length	120 cm and above	120 cm	Suitable
	Material Used	Free	Wood	Suitable

CC: BY-NC-ND

	Seat Height	41cm – 46 cm (19)	45 cm	Suitable
	Seat Width	38.70 cm and a maximum of 43.36	40 cm	Suitable
	Length	120 cm and above	300 cm	Suitable
	Material Used	Free	Wood	Suitable
	Seat Height	41cm – 46 cm (19)	45 cm	Suitable
	Seat Width	38.70 cm and a maximum of 43.36 cm	40 cm	Suitable
	Table Height	90 cm	90 cm	Suitable
	Table Width	60 cm	70 cm	Suitable
	Backrest Height	70 cm	100 cm	Suitable
	Material Used	Free	Marble, Wood	Suitable
	Seat Height	41cm – 46 cm (19)	45 cm	Suitable
	Seat Width	38.70 cm and a maximum of 43.36 cm	30 cm	Not Suitable
	Table Height	90 cm	90 cm	Suitable
	Table Width	60 cm	70 cm	Suitable
	Material Used	Free	Marble, Wood	Suitable

It is observed that trash cans and lighting fixtures are generally positioned in a way that does not obstruct circulation within the area. The fact that trash cans are mostly located along the edges of pedestrian walkways is considered a layout that supports the continuity of circulation within the area. However, although all are of the same type, it has been determined that the height of some trash cans falls below recommended standards, and that this situation is particularly limiting in terms of comfort when using them while standing. In contrast, it has been found that the width and lid features of the trash cans are largely in compliance with standards. While the durability of the materials used against environmental conditions is a positive feature, the use of a single type of trash can throughout the park and their insufficient number are noteworthy. Upon examining the lighting elements, it is observed that solutions largely compliant with standards in terms of height and material properties have been preferred (Table 2). In particular, ensuring adequate light levels on pedestrian paths and open areas stands out as a positive finding regarding the park's nighttime use.

Table 2. Characteristics of the lighting units and garbage bins in Batı Park

Photos	Feature	Recommended Value	Measured Value	Suitability
	Height	It must be at least 220 cm. (19).	1000 cm	Suitable
	Material	It should be an outdoor material suitable for its purpose.	Metal	Suitable
	Height	It must be at least 220 cm. (19).	800 cm	Suitable
	Material	It should be an outdoor material suitable for its purpose.	Metal	Suitable
	Height	90-120 cm (19)	70 cm	Not Suitable
	Width	30 cm	30 cm	Suitable
	Material	It must be in a sealed box and resistant to environmental conditions.	Wood,metal	Suitable

An examination of the evaluation results regarding stairs, ramps, bridges, and wayfinding and informational signage reveals that accessibility within the site has been partially achieved (Table 3). It was determined that stairs and ramps serve a function that supports circulation within the site; however, in some cases, measurements such as step width, riser height, and ramp slope do not comply with recommended standards. In particular, the fact that ramp slopes exceed limit values at certain points stands out as a notable finding from the perspective of universal design principles. It was found that the bridges are generally neglected and do not incorporate materials or design details suitable for long-term use. Upon examining the wayfinding and information signage, it was observed that the

CC: BY-NC-ND

number of signs is insufficient compared to the overall area, and their spatial distribution does not form a comprehensive wayfinding system. While some of the existing signs are dimensionally appropriate, it was determined that certain examples are positioned at non-standard heights. This situation was assessed as a factor limiting users' ability to navigate the area and access information.

Table 3. Features of stairs, ramps, guidance and information signs in Batı Park

Photos	**Feature**	**Recommended Value**	**Measured Value**	**Suitability**
				
	Step width	30 cm	50 cm	Suitable
	Riser height	It should be between 15 cm and 18 cm.	55 cm	Not Suitable
	Width	Min 76 cm	60 cm	Not Suitable
	Railing	90 cm	-	Not Suitable
	Materials used	Non-slip material	Concrete	Suitable
	Ramp length	Free	1000 cm	Suitable
	Ramp width	Min 90 cm	150 cm	Suitable
	Ramp slope	It should not exceed 8%	% 10	Not Suitable
	Materials used	Non-slip material	Concrete	Suitable

	Width	90 cm and above	230 cm	Suitable
	Railing height	90 cm	90 cm	Suitable
	Materials used	Non-slip material	Stamped Concrete	Suitable
	Height	It should be between 210-250 cm.	220 cm	Suitable
	Width	Free	300 cm	Suitable
	Materials used	It should be easy to read and durable.	Wood	Suitable
	Height	It should be between 210-250 cm.	270 cm	Not Suitable
	Width	Free	40 cm	Suitable
	Materials used	It should be easy to read and durable.	Metal	Suitable

To evaluate the findings obtained in this study within a more comprehensive framework, the universal design evaluation indicators proposed by Ergen et al. (2025) have been marked in the table with the options “appropriate” and “inappropriate” (Table 4).

CC: BY-NC-ND

Table 4. Evaluation indicators of Samsun Batı Park according to universal design principles (adapted from Ergen et al., 2025)

Universal Design Principles			**Batı Park's compliance with the criteria**	
	Indicators		**Suitable**	**Not Suitable**
Equal use	Places where children of different genders can be together		+	
	Places where children with different physical characteristics can be together.		+	
	Areas designed for all types of disabilities			+
Flexibility in Use	Offering choices for different uses.		+	
	Simplicity in the overall design approach			+
Simple Use and Understandability	Hierarchy in the pathways		+	
	Central points and activity areas		+	
	Application of informational and directional signage		+	
Tolerance for Design Errors	Use of safety features		+	
	Quality of playground equipment			+
Low Physical Effort	Availability of ramps, stairs and rest areas		+	
	Ergonomic use and easy accessibility of equipment		+	
Size and Space for Approach and Use	**Accessibility to parks**	Access to parks via public transport	+	
		Easy access for pedestrians	+	
		Parking	+	
	Structural design	Roads	+	
		Ramps	+	
		Urban infrastructure		+
		Children's playground equipment	+	
	Plant usage	Selection of suitable plant species		+
		Plant placement and positioning		+
		Plant design	+	

According to the assessment results, Samsun Batı Park's level of compliance with universal design principles was determined to be moderate. Of the 22 indicators evaluated, 16 were marked as "compliant" and 6 as "non-compliant." Based on these results, the park's overall compliance rate with universal design principles was calculated to be approximately 72%. These quantitative evaluation results have been visualized using analytical charts to provide a clearer understanding of the park's current status in relation to universal design principles (Figure 3).

CC: BY-NC-ND

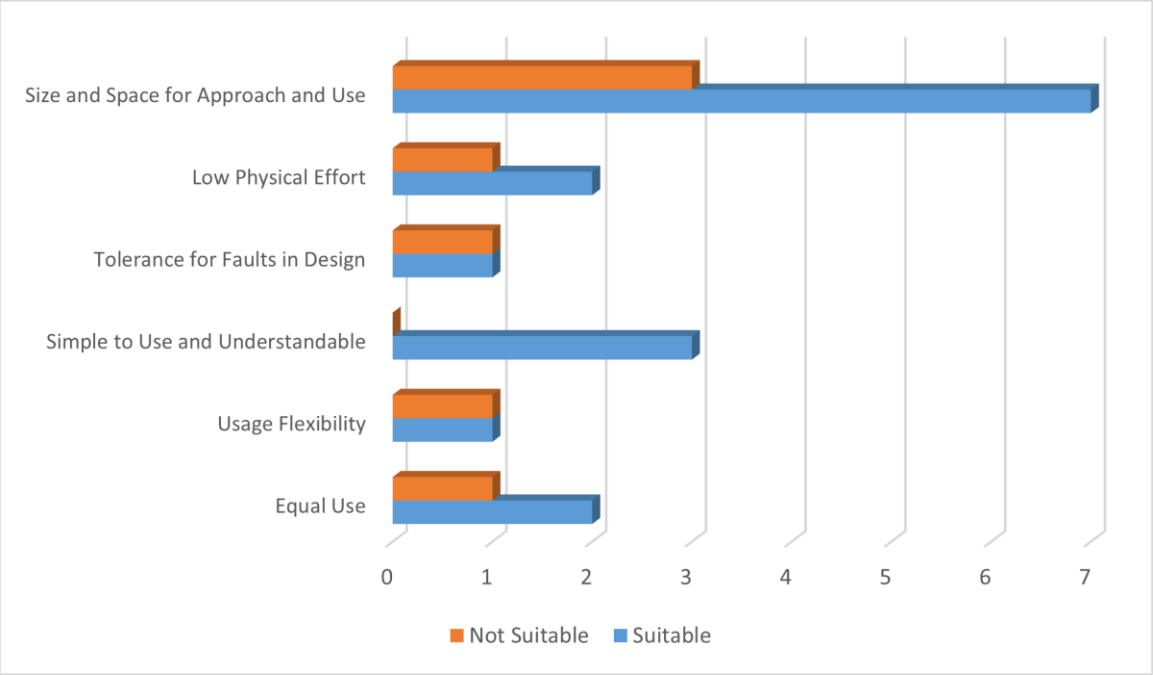


Figure 3. Batı Park's compliance with universal design principles

4. DISCUSSION and CONCLUSION

Urban parks are defined as planned open green spaces that cater to all age groups and offer a combination of passive and active recreational opportunities. Typically located a certain distance from the city center and accessible by public transportation, these areas facilitate both individual and group-based use through walking and running paths, sports fields, children's play areas, picnic areas, seating elements, and various social amenities. Urban parks, which are designed in an integrated manner with landscape architecture, not only serve recreational functions but also fulfill educational and ecological roles, thereby contributing to the sustainability of the urban environment (12, 13, 14). For this reason, urban parks should be regarded as a crucial component of the urban spatial system.

Urban spaces are multilayered systems comprising both private and public areas and encompassing both built and unbuilt spatial components (23). Urban outdoor spaces such as streets, avenues, squares, and parks are areas where human environment interaction occurs intensively; they are not limited to the function of shelter but also address social needs such as education, culture, health, commerce, sports, and recreation (15). The urban infrastructure elements used in these spaces not only meet users' physical, psychological, and socio-cultural needs but also play a decisive role in the formation of urban identity and the shaping of environmental perception (16).

The ability of public spaces to become sustainable and inclusive is directly linked to their use by all user groups in an equal and independent manner. According to Gehl (2011), social sustainability is made possible by accessible and inviting spatial arrangements that allow different social groups to come together in public spaces (17). For this reason, accessibility stands out as one of the fundamental components of contemporary urban design. The design of urban outdoor spaces, taking into account anthropometric and ergonomic criteria; ensuring sufficient circulation areas, using appropriate paving surfaces, and effectively placing wayfinding elements are among the fundamental principles of barrier-free spatial planning (18). However, technical compliance with standards (accessibility) and actual ease of use (usability) are distinct concepts, and this distinction must be taken into account when evaluating city parks from the perspective of universal design (24).

Based on an assessment conducted within this theoretical framework, it was determined that Samsun Batı Park demonstrates a moderate level of compliance with universal design principles and in terms of diversity of use. The park's large area, its ability to offer various recreational functions, and

CC: BY-NC-ND

its easily accessible location via public transportation stand out as significant spatial advantages that support its intensive use by diverse user groups. However, site inspections and the results of the tabular evaluation indicate that full compliance with universal design principles has not been achieved in some of the urban amenities and spatial components within the park.

The findings are largely consistent with the literature, which indicates that universal design in urban open spaces is primarily addressed through the lens of physical accessibility criteria. While ramps, walkways, and basic circulation elements in Samsun Batı Park were designed with accessibility in mind, the fact that seating units vary in terms of ergonomic standards, the failure to provide appropriate slope values on ramps, and the inadequacy of wayfinding systems were identified as factors limiting the equal and independent use of the space by all users. This situation indicates that universal design principles have not been addressed with a holistic approach throughout the park and have largely been limited to specific fixtures and arrangements.

In an assessment conducted according to universal design principles, 16 out of a total of 22 indicators were rated as "compliant" and 6 as "non-compliant," with the park demonstrating compliance at approximately 72%. This indicates that Samsun Batı Park has reached a certain level in terms of inclusive design; however, it also reveals that there are significant areas requiring improvement. In particular, it is evident that ergonomic adjustments to enhance comfort and safety for people with disabilities, the elderly, and children are insufficient.

The inadequacy of focusing solely on physical criteria in the evaluation of public spaces aligns with the publicness approach developed by Németh and Schmidt (2011). According to this approach, the quality of public spaces should be assessed not only in terms of accessibility but also through the diversity of use, spatial legibility, and the relationship that user groups establish with the space (1). In the evaluation conducted at Samsun Batı Park, it was determined that the park is heavily used by different user groups; however, due to the ergonomic shortcomings of some amenities and the limitations of the wayfinding systems, the spatial experience is not equally supported for all users.

In light of these findings, spatial and facility-based adjustments must be addressed through a holistic approach to make Samsun Batı Park more compliant with universal design principles. To ensure equitable use, it is important to enhance the continuity of tactile surfaces, create circulation areas wide enough for wheelchair use, and distribute accessible restrooms evenly throughout the park. In addition to ensuring that existing seating units and picnic tables comply with standards, the distribution, orientation, shading conditions, and diversification of these amenities to cater to different user groups within the area will significantly enhance user comfort. Increasing the number of multisensory play equipment in children's play areas is considered another key element that supports usage flexibility and inclusivity.

In conclusion, Samsun Batı Park possesses the potential to serve as a significant urban open space due to its spatial potential and diversity of use. However, through comprehensive planning guided by universal design principles, it is possible to transform the park into a more accessible, safe, comfortable, and sustainable public space for all users. It is anticipated that the evaluation framework presented in this study will serve as a guiding reference for the analysis of similar urban parks.



Peer-review: External, Independent.

Acknowledgements:

-

Declarations:

1. Statement of Originality:

This work is original.

2. Author Contributions:

Concept: ÖZ,EŞ,PY; ***Conceptualization:*** ÖZ,EŞ,PY; ***Literature Search:*** ÖZ,EŞ,PY; ***Data Collection:*** ÖZ,EŞ,PY; ***Data Processing:*** ÖZ,EŞ,PY; ***Analysis:*** ÖZ,EŞ,PY; ***Writing – original draft:*** ÖZ,EŞ,PY; ***Writing – review &***

editing: ÖZ,EŞ,PY.

3. Ethics approval:

Not applicable.

4. Funding/Support:

This work has not received any funding or support.

5. Competing Interests:

The authors declare no competing interests.

6. GenAI Usage Statement:

No GenAI tools were used at any stage of the study.

7. Sustainable Development Goals:



REFERENCES

[1] Németh, J., & Schmidt, S. (2011). The privatization of public space: modeling and measuring publicness. Environment and planning B: Planning and Design, 38(1), 5-23.

[2] Karakaya, N., & Taşlı, T. C. (2019). Yaşam Kalitesinin Arttırılmasında Kent Parklarının Önemi: Eskişehir Örneği, Uluslararası Araştırmaları Dergisi, 14(20).

[3] Atanur, G. S., & Ersöz, N. D. (2020). Kavramsal Gelişim Süreçleri ve Tasarım Bileşenleri Bağlamında Kent Parkları, Ağaç ve Orman Dergisi, 1(1), 1-66.

[4] Csomos, G., Farkas, J. Z., Szabo, B., Bertus, Z., & Kovacs, Z. (2023). Exploring the use and perceptions of inner-city small urban parks: A case study of Budapest, Hungary, Urban Forestry & Urban Greening.

[5] Mace, R., L., Hardie, G., J., Place, J., P., (1991). Accessible Environments: Toward Universal Design. Design Intervention: Toward a More Humane Architecture, Von Nostrand Reinhold, New York.

[6] Hacıhasanoğlu, I. (2003). Evrensel tasarım, Tasarım Kuram Dergisi, 2(3), 93-101.

[7] Arat, Y., ve Sayar, G., (2017). İmaj Yapı Tasarımda Evrensel Tasarım İlkelerinin Rolü; Konya Bilim Merkezi Örneği, Journal of Engineering Sciences and Design, 145

[8] Çelikyay, S. ve Karayılmazlar, A. S. (2016). Bartın kent merkezindeki kamusal alanların kentsel ergonomi ve kent kimliği açısından incelenmesi. Bartın Orman Fakültesi Dergisi, 18(2), 224-238.

[9] Ertan, K. ve Eldem, C. (2022). Temsili bir giyilebilir dış iskeletin ergonomik analiz yöntemleri ile incelenmesi. Ergonomi, 5(1), 18-25.

[10] Akın, G., Önal, S. (2016). Kentsel Alanların Tasarımında Ergonomik Sorunlar. AÜDTCF, Antropoloji Dergisi, 31: 51-60.

[11] Ergen, M., Ad, A., & Uzun, Ö. F. (2025). An investigation of Sakarya Aziz Duran Park in the context of universal design principles. Journal of Architectural Sciences and Applications, 10(1), 126-146.

CC: BY-NC-ND

[12] Ertekin N (1992) Yeşil Alan Olarak İzmir İçin Önemi Olan Kültürparkın Bitki Varlığının Saptanması, Korunması ve Geliştirilmesi Üzerine Araştırmalar. Yüksel Lisans Tezi, Ege Üniversitesi, İzmir.

[13] Özdemir B (2012) Kent Parklarının Kentsel Yaşam Kalitesine Katkıları. Yüksek Lisans Semineri, Selçuk Üniversitesi, Konya.

[14] Özkır A (2007) Kent Parkları Yönetim Modelinin Geliştirilmesi. Doktora Tezi, Ankara

[15] Konuk, G., & Bakan, K. (1987). Türkiye'de Kentsel Dış Mekanların Düzenlenmesi. Tübitak Yapı Araştırma Enstitüsü, Yayın, (U5).

[16] Güremen 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, 254-291

[17] Gehl, J. (2011). Life between buildings.

[18] Kaplan, H., & Ulvi, H. (2007). Engelsiz Tasarım: Anlamı, İçeriği ve Ankara'da Gerçekleştirilen Bir Saha Çalışmasının Sonuçları. ÖZ-VERİ Dergisi, TC Başbakanlık Özürlüler İdaresi Başkanlığı Hakemli/Süreli Yayını, 4(1).

[19] Türk Standartları Enstitüsü (TSE) (2026), Türkiye. Erişim Adresi (01.02.2026) https://www.tse.org.tr/

[20] Bulut, N., & Çetinkaya, A. F. (2025). Kentsel Alanlarda Rekreasyon ve Spor. Spor, Sağlık ve Eğitim Araştırmaları Dergisi, 4(1), 28-38.

[21] Pepe, B., & Seven, D. (2023). Kentsel yaşam kalitesi açısından çocuk parkları ve alanları (Betimsel bir çalışma). Düzce Üniversitesi Spor Bilimleri Dergisi, 3(1), 53-62.

[22] Çatalyürekoğlu, S. (2022). Kent mobilyalarının tasarım süreçlerinin ergonomi kriteri açısından incelenmesi: Türkiye kapsamında 3 büyük şehir örneği (Master's thesis, Mimar Sinan Fine Arts University (Turkey)).

[23] Tutanç, B. (2023). Kompleks kent sistemi karşısında mekânsal planlama sistemi analizi ve değerlendirme yöntemi önerisi-Türkiye örneği (Doctoral dissertation, Mimar Sinan Fine Arts University (Turkey)).

[24] Iwarsson, S., & Ståhl, A. (2003). Accessibility, usability and universal design—positioning and definition of concepts describing person-environment relationships. Disability and rehabilitation, 25(2), 57-66.

