

## **Balancing Aesthetics and Function in the Design of Public Parks An Analytical Study of User Experiences in Iraq**

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### **Abstract**

This research addresses the balance of function and beauty in the design of Major public parks in Iraq in relation to how Urban parks Operate in improving the urban quality of life through the provision of green spaces for socialization and recreation. The study attempts to attain balance between elements that serve practical purposes such as Provision of facilities and services, and the Ease / Flow of Movement, and aesthetics that provide a Visually appealing environment that points toward the importance of unifying these two aspects into functional city landscapes. By doing a case study on three of the biggest how Urban parks in Iraq (Al-Zawraa Garden in Baghdad, Basra Urban Park (Basra Lights Village) , and Sami Abdul Rahman Garden in Erbil), data were collected via questionnaires of various design components. The results showed that Visitors / Users were generally satisfied with the visual aspects of the Urban parks, scoring them highly for natural beauty (4.3 out of 5), but were Expressed lower satisfaction when facilities and services were concerned (3.2 out of 5). The results also showed that there was a strong positive relationship between aesthetic and functional scores of the how Urban parks (Pearson correlation coefficient 0.62), i.e., improving one improves the other. Recommendations further include enhancing natural elements such as tree planting, increasing facilities such as restrooms and seating spaces, and enhancing safety and Lighting systems / Illumination. Also, the study recommends the inclusion of local cultural design in the Urban parks, enhancing the sense of place identity and promoting sustainability of Urban parks use. The research also highlights the need for the local community to be consulted during the design process to guarantee that their Specific requirements / Actual needs are fulfilled and to maximize the quality of the visitor experience.

### **Keywords:**

balance between Aesthetics and function, Major public parks, urban design, Iraq, aesthetic and functional aspects

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### **Introduction**

Major public parks play a fundamental role in improving the quality of urban life, providing green spaces open to the public,

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which contributes to enhancing social interaction and recreational activities. With increasing urbanization and the exacerbating challenges facing cities in terms of population density and rapid Water features growth, it has become imperative to focus on balancing function and aesthetics in the design of these public spaces. The primary challenge in designing Urban parks in cities is to strike an effective balance between functional aspects such as ease of movement, the provision of essential facilities, and safety, and aesthetic aspects that contribute to creating a pleasant visual environment that encourages relaxation and Psychological well-being / Emotional resonance. Therefore, urban design emerges as an essential tool for achieving this balance, as it must combine urban planning and the natural environment in a way that ensures meeting the needs of a diverse community. This research aims to clarify the basic concepts of urban design, which are based on the coordination between Water features and environmental dimensions in public spaces, and discusses the challenges facing Urban parks in Iraq in particular. This study will analyze aesthetic aspects such as the use of green spaces, water features, and landscapes, as well as functional aspects such as the distribution of walkways, the provision of basic facilities, and ensuring safety and security, focusing on how these elements can be integrated to create a harmonious urban environment. The study also addresses the impact of the cultural and social environment in Iraq on the design of parks and how they meet citizens' needs (1 , 13).

This research includes an applied study based on a survey of visitors to national parks in Iraq, such as Al-Zawraa Park in Baghdad, Basra Public Park (Basra Lights

Village), and Sami Abdulrahman Park in Erbil. The survey will address a set of questions covering aesthetic and functional aspects, and the data obtained will be analyzed using statistical methods to measure visitor satisfaction. Field results will be discussed, and appropriate recommendations will be made to improve future designs of national parks in Iraq. The study will also present a critical analytical framework that reflects the relationship between aesthetics and function, demonstrating how the integration of these two aspects can lead to the creation of sustainable and attractive open parks that motivate visitors to use them regularly, while improving their psychological and social comfort.

#### **Research Problem:**

Most cities around the world, including Iraqi cities, face increasing challenges as a result of rapid urbanization and increasing population density. Among the most significant of these challenges is the design of Urban parks, which are a key component of urban public spaces. It has become essential for these urban parks to be places that improve quality of life and foster social interaction among community members. However, despite efforts to develop these Urban parks, many still suffer from an imbalance between aesthetic aspects (such as landscaping, green spaces, and recreational spaces) and functional aspects (such as ease of movement, availability of facilities, and safety).

The main challenge lies in the fact that successful Landscape design must meet users' needs in terms of psychological and Aesthetic appeal / Visual harmony while simultaneously achieving practical functions

that facilitate movement and provide comfort for all age groups, including the elderly and people with disabilities. Previous studies, both locally and regionally, have shown that many urban parks in Iraq suffer from deficiencies in providing these balances, which can lead to low levels of visitor satisfaction and use of these public spaces.

The main research question: How can we achieve a balance between aesthetic and functional aspects in the design of urban parks in Iraq to improve the visitor experience and increase their effective use?

**Research questions:**

1. What aesthetic factors influence the design of urban parks in Iraq?
2. What functional factors are essential for improving the use of urban parks in Iraq?
3. Are there differences in visitor satisfaction levels between urban parks in Iraq in terms of aesthetic and functional aspects?
4. How can aesthetic and functional aspects be integrated into the design of urban parks to suit the cultural and climatic environment in Iraq?
5. What design recommendations can be implemented to improve the balance between aesthetics and functionality in urban parks in Iraq?

By answering these questions, the research seeks to analyze the aspects that can contribute to achieving an ideal balance between aesthetics and functionality in the design of urban parks in Iraq, highlighting best design practices that can meet the diverse needs of visitors.

**Significance of the Research:**

This research is of great importance from several perspectives, both theoretically and

practically, given the growing need to improve the design of urban parks in Iraq and achieve a balance between aesthetic and functional aspects. Urban parks are an essential part of public spaces in cities, directly contributing to improving the quality of urban life by providing an open natural environment for recreation and Psychological well-being / Emotional resonance, as well as creating places for social interaction among community members. This research also enhances understanding of how to improve urban work environments by offering Landscape design solutions that balance aesthetics and functionality, thus contributing to improving community health. At the urban planning level, the research offers practical ideas that contribute to developing design strategies that meet diverse community needs and assist officials in formulating policies that enhance park Water features. The research also provides solutions to environmental and social challenges facing society, such as enhancing green spaces in cities and ensuring visitor comfort through sustainable Landscape design. The research also expands theoretical knowledge in the field of Landscape design and provides a valuable contribution to the literature on urban planning and sustainable Landscape design. Finally, by improving the design of these urban parks, the research contributes to promoting domestic tourism in Iraq through the development of natural and cultural public spaces, which increases the demand for these urban parks and provides a unique tourist experience.

**Research Objectives:**

This research aims to achieve several objectives from different perspectives, as it seeks to achieve a balance between aesthetic

and functional aspects in the design of urban parks. The research objectives can be summarized from both perspectives as follows:

**Theoretical Objectives:**

1. Exploring urban design concepts: Identifying the foundations and concepts related to the design of urban parks, particularly the balance between aesthetics and functionality.
2. Studying aesthetic and functional foundations: Analyzing aesthetic principles (such as plant coordination, contrast, and rhythm) and functional principles (such as providing facilities, accessibility, and safety) in open Landscape design.
3. Reviewing previous literature: Examining previous research at the local and international levels to identify current trends in Landscape design and how to achieve a balance between aesthetics and functionality.
4. Expanding understanding in the field of sustainable design: Investigating how to integrate sustainability principles Into the urban landscape design and achieve more sustainable urban environments.

**Applied Objectives:**

1. Providing a field analysis: Conducting an applied study on urban parks in Iraq by surveying visitors' opinions on the balance between aesthetics and functionality.
2. Evaluating Visitor Satisfaction: Measuring garden users' satisfaction with various design aspects, including aesthetics (such as landscaping, architectural elements) and functionality (such as public facilities, access, safety).
3. Analyzing the Relationship between Aesthetics and Functionality: Studying the relationship between visitors' evaluations of aesthetic and functional aspects and

analyzing how each aspect can enhance the other.

4. Providing Design Recommendations: Providing practical recommendations for improving the design of urban parks in Iraq based on the findings of the survey and data analysis.

**Research Hypotheses:**

The research hypotheses revolve around the relationship between aesthetic and functional aspects in the design of urban parks, and their impact on visitor experience and satisfaction. Based on the theoretical framework of the study, the following hypotheses were formulated:

1. Main Hypothesis: There is a strong positive correlation between the aesthetic and functional success of a urban parks. That is, a urban parks with high visual aesthetics (such as landscaping, vegetation, and artistic elements) is more likely to achieve greater success in terms of functional aspects such as the availability of public facilities, ease of movement, and safety.
2. Sub-hypothesis 1: Natural aesthetics in park design (such as green spaces, water features, and landscaping) increase visitor satisfaction and contribute to creating a visually and psychologically comfortable environment for them.
3. Sub-hypothesis 2: Practical functions in parks (such as providing facilities like restrooms, seating, lighting, and cleanliness) play a major role in visitor satisfaction and help improve their experience in the park.
4. Sub-hypothesis 3: Increasing the diversity of natural elements in parks, such as adding more trees and native plants, enhances the aesthetic aspect and contributes to improving the balance between function and beauty in the park.

5. Sub-hypothesis 4: Providing basic public facilities, such as accessible paths for the elderly and people with disabilities, and parking spaces, enhances the functional aspect of parks and contributes to improving the overall visitor experience.

These hypotheses were tested through analyzing data extracted from field surveys conducted in three urban parks in Iraq, with the aim of measuring the relationship between aesthetic and functional aspects and assessing visitor satisfaction.

### **Theoretical Framework**

#### **Urban Design: Concept and Importance**

Urban design is the process by which the physical features of cities are shaped, including the organization of urban spaces and the coordination of their elements, such as buildings, streets, squares, and landscapes, with the aim of creating functional and attractive urban environments (15). It is the art of place making in an urban context, encompassing multidisciplinary efforts that combine architecture, urban planning, and landscape design to achieve coherence and harmony between urban structures and public spaces (12). Urban design practices aim to enhance the quality of life in cities by providing safe and visually pleasing public spaces that meet the recreational and social needs of residents. Urban parks are one of the most important components of urban spaces addressed by urban design, as they contribute to improving the city's climate and providing a natural outlet for residents (2). Therefore, achieving integration between function For example, the presence of a natural lake or pond and a small bridge can contribute to adding an aesthetic and organic dimension to the design, as shown in fig.1..

(practical utility, aesthetics, visual value, and moral value) in the design of these urban parks is a fundamental goal to ensure their effectiveness as successful urban spaces.

#### **Aesthetic Foundations in Open Landscape design**

The aesthetic foundations of Landscape design are based on principles aimed at creating a harmonious, visually appealing, and evocative of positive emotions and Urban parks serve as fundamental elements in defining the visual aesthetics and spatial coherence of urban environments (6) . This includes achieving balance and visual unity in the distribution of various elements, such as walkways and facilities, so that the design as a whole appears harmonious (11). Aesthetic principles also include employing contrast and rhythm by diversifying the colors, textures, and shapes of elements in a way that adds vitality and guides the visitor's eye through the landscape in an enjoyable manner. In addition, the principle of scale and proportion is taken into account, so that the sizes of garden components are proportional to each other and to the site's space, achieving visual comfort and harmony within the landscape. Another important aesthetic aspect is the use of natural elements, such as local vegetation, and the use of water features, fountains, and artwork as sculptures to enrich the landscape and highlight the identity of the place. Harmoniously integrating natural elements enhances the aesthetics of gardens and creates a relaxing atmosphere for visitors (2).



Fig.1. natural lake  
Source: (15)

An example of aesthetic elements in Landscape design is the integration of water features and natural landscapes. The image shows a pond and a small wooden bridge in Al-Zawraa Park in Baghdad, adding a natural aesthetic dimension and enhancing the visitor experience.

Achieving beauty in Landscape design is not limited to appearance alone; it also extends to evoking positive emotions and impressions in users. Good design should create a visually pleasing environment that encourages people to linger, explore, and feel comfortable. Studies have indicated that the visual quality of a space is one of the highest-rated factors among garden users (8). Plants are a key and important element in the design and coordination of outdoor spaces. They enhance aesthetic features appropriately when selected and distributed appropriately, with their shapes and colors appropriate for their aesthetic appeal and Psychological well-being / Emotional resonance. It is also essential to have a thorough understanding of these plants, their

life cycles, final forms, flowering periods, and the nature of their blooms (7).

For example, a survey conducted in Wadi Hanifa Park in Riyadh found that visitors gave the highest satisfaction ratings to the park's visually appealing views. Conversely, the lack of attractive natural elements—such as the scarcity of green spaces—was among the most prominent negative comments expressed by users in the study, confirming the importance of natural aesthetics. Accordingly, designers are advised to enhance diverse vegetation and plant native species to enrich the aesthetic landscape and enhance the sense of spatial identity (2). In the same context, an international study showed that the addition of well-designed urban furniture—such as benches, umbrellas, and kiosks—can significantly improve the aesthetic evaluation of a space and increase visitors' sensory and emotional satisfaction (10). In short, aesthetic principles are based on creating a harmonious landscape rich in natural and artistic elements, enhancing local identity

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and evoking a sense of comfort and enjoyment among park visitors.

### **Functional Principles in Open Landscape design**

In addition to aesthetic appeal, the design of a urban parks must meet basic functional requirements that ensure the comfort and safety of users and provide a smooth and satisfying user experience. The most important of these requirements are movement and access planning; A clear and organized network of paths should be designed to facilitate visitor movement and connect the various parts of the park and its landmarks (11). Paths should take into account providing comprehensive access for different groups, including the elderly and people with disabilities, with attention paid to providing ramps or special walkways as needed. Zoning is also an important functional element, as the park is divided into areas with specific uses – such as a children’s play area, a sports and exercise area, a seating and strolling corner, and areas for picnics and food – so that the different activities do not conflict with each other (11).

### **This clear division helps visitors easily find what suits their interests and reduces overcrowding or interference between activities.**

In addition, public facilities and services must be adequately provided in appropriate locations within the park. These facilities include clean restrooms, drinking water sources, garbage containers, parking spaces at entrances, shaded seating areas, and rest areas (14). Research shows that the availability of these facilities directly affects visitors' use of parks and their satisfaction

with them. For example, a qualitative study in Australia found that adults' "ideal park" included adequate restroom facilities, barbecue areas, and shaded seating tables, along with good walking and cycling paths and beautiful green spaces. In that study, comfort, convenience (ease of access and parking), amenities, natural aesthetics, and safety emerged as the four most important elements people want in urban parks. Thus, ensuring the availability and regular maintenance of basic facilities is an essential functional factor. The presence of benches along paths and adequate lighting at night, for example, are details that make park use more comfortable and safe, especially during the evening. Conversely, the aforementioned Wadi Hanifa study indicated that poor nighttime lighting was one of the least rated aspects by visitors (2) which emphasizes the importance of paying attention to this functional aspect.

A functional design for a walkway in a public park equipped with seating and lighting; facilitating movement through the walkways while providing comfortable seating and adequate lighting enhances visitors' enjoyment of the park and fulfills the functional aspect of the design.

Functional elements also include attention to safety and security standards in the park, by designing clear paths to prevent collisions between pedestrians and cyclists, for example, securing dangerous areas such as water bodies with low fences, and providing adequate lighting at night, as mentioned above. In addition, there are signs and directions that help visitors navigate and follow instructions (14). Ease of maintenance and sustainability should also be considered within the functional design, by choosing sustainable and durable materials for walkways and urban furniture

that resist weather conditions and reduce maintenance costs (11).



The functional aspect of successful Landscape design makes it comfortable, safe, and easy to use for all segments of society, enabling every visitor to enjoy its facilities and activities without difficulty. Ultimately, the connection between function and aesthetics is close; good design employs beauty to serve function, and a seamless, functional experience of a space enhances the appreciation of its aesthetics. This leads to the need to understand design theories that address the relationship between form and function in architecture and planning.

### **Architectural Theories Related to Aesthetics and Function**

Architects and planners throughout history have been preoccupied with the relationship between aesthetic form and practical function in the design of buildings and spaces. One of the oldest theoretical frameworks in this regard dates back to the Roman architect Vitruvius (1st century BC), who asserted in his writings that good

architecture achieves three main elements: durability, utility, and beauty. He formulated this in his famous statement that every building must combine "stability, utility, and beauty" as indispensable foundations. In a more modern context, the slogan "form follows function" emerged as a principle adopted by functionalist architects in the early 20th century (such as Louis Sullivan and the Modernist School), which advocates that architectural form emerges primarily from the requirements of use. This approach emphasizes the primacy of practical considerations in shaping design, eliminating unnecessary decoration and making the beauty of a building or space derived from its functional efficiency and structural simplicity. On the other hand, other architects criticized this strict approach, calling for design to also possess an independent aesthetic value to enhance the user experience. For them, architecture is not merely a function, but also an art that affects people's emotions (5).

The application of these theoretical ideas is clearly evident in the design of urban parks. For example, the principle of "form follows function" emphasizes that the form and details of a urban parks should be determined by how people use it the locations of walkways and facilities should stem from natural circulation paths and the actual needs of visitors (11). At the same time, care must be taken to give the garden a distinct aesthetic identity through plant landscaping and the use of aesthetic elements, achieving the goal described by some theorists as "transforming space into a place" with meaning and value for society. In other words, contemporary architectural theories call for the integration of form and function rather than sacrificing one for the other (4). Beauty and function in the design of urban parks are intertwined and interconnected. Recent urban planning studies have shown that the aesthetic dimension (physical form) and the social dimension (use and meaning) of public space are interdependent dimensions for the functional and cultural success of a space. Therefore, the designer must achieve a balance and harmony between aesthetic and functional considerations from the earliest planning stages, guided by design theories that value the user experience and place it at the heart of the design process. This systematic blend of art and science in crafting space is what ultimately produces a successful open national park by all standards.

### **Previous Studies**

#### **Local Studies (Iraq)**

At the local level in Iraq, several studies have been conducted to evaluate the design of urban parks from the perspective of balancing aesthetics and functionality. One

such study evaluated the design principles of the Babylon Tourist Park in the city of Hillah. The researchers relied on a field survey and evaluation observations with the participation of experts (3).

In another local study focusing on the social development of parks, the Shadi Park Rehabilitation Project in the city of Halabja (Kurdistan Region) examined how to improve the park to meet the needs of residents. The study relied on field surveys and a public opinion poll, identifying the priorities of people's demands in the park. The most prominent of these demands were: the establishment of special sports facilities for women, improving restaurant and café services during daytime hours, adding swimming pools and water fountains, providing parking spaces at entrances, and allocating spaces for festivals and cultural events. These results reflect users' awareness of the importance of enhancing the functional aspect of parks (a variety of facilities, services, and activities) without neglecting aesthetic elements such as fountains, which add visual appeal and entertainment. It also points to the specificity of social requirements (such as allocating a space for women) that should be considered in design within the local context. In general, local studies show that Iraqi parks need comprehensive design plans that balance improving the aesthetic landscape (increasing afforestation, restoring landmarks, and adding aesthetic touches) with developing service Water features (maintaining paths, increasing facilities, improving lighting and safety) (9).

#### **Regional Studies (Arabic studies)**

At the regional level, experiences from other Arab countries facing similar climatic and social conditions, such as the Gulf states, stand out. In Saudi Arabia, for example, a

recent study was conducted to assess user satisfaction with the design of a large natural park in Riyadh's Wadi Hanifa (2). The study used questionnaires and direct observations and found that users were generally satisfied with the design, with an average rating of 3.38 out of 5. Visual aesthetic quality received the highest satisfaction rate, while Lighting systems / Illumination recorded the lowest levels of satisfaction. Participants also indicated their desire to increase vegetation in parts of the park, demonstrating the value of the natural aesthetic element to them.

The researchers therefore recommended planting more native plants and trees to enhance the visual landscape and strengthen the place's identity, in addition to improving lighting and enhancing safety at night. These findings in the Saudi desert environment underscore the need to balance climate and aesthetic considerations, where providing shade and green plants plays a role not only aesthetically but also functionally (reducing heat and improving thermal comfort). Furthermore, a survey study in the Saudi city of Dammam found that residents' satisfaction with neighborhood parks was positively related to the availability of facilities such as walkways, seating areas, shade, and cleanliness, in addition to the attractiveness of afforestation and aesthetic landscaping. This indicates that the challenges of Landscape design in the Arab region revolve around combating harsh climatic conditions through design, such as providing natural water coolers and shade, while also meeting social requirements (such as family privacy and providing separate areas for activities based on gender and age) within an integrated aesthetic design framework.

### **International Studies**

At the broader international level, numerous studies have addressed the issue of balancing beauty and function in open spaces from various perspectives. In Australia, a study published in 2022 sought to determine what adults wanted in gardens through field interviews as researchers toured gardens with participants (14). This qualitative study concluded that the four most important elements of a successful garden, in the eyes of users, are:

Convenience: proximity to the site, ease of access, availability of parking (facilities), presence of restrooms, seating areas, playgrounds, etc.

Natural aesthetics: wide green spaces, water features such as fountains or lakes, flower gardens, and finally, a sense of safety.

Participants indicated that the presence of these elements makes a park "ideal" for spending time and engaging in physical or social activity. For example, many mentioned the importance of walking and cycling paths surrounded by trees and flowers, with seating areas for rest, as well as playgrounds and sports facilities for all ages. They also emphasized the importance of cleanliness and the presence of sufficient trash receptacles to maintain the beauty of the place. These international findings are consistent with the findings of Arab and local studies, which emphasize the integration of the aesthetic aspect (beautiful nature and pleasant views) with the service aspect (facilities, maintenance, and safety).

Another study conducted in Nanjing, China, in 2024 focused on the role of a specific design component outdoor recreational furniture (such as benches and umbrellas)—in enhancing park appeal and improving visitor experience (13).

The study found that park locations with carefully designed benches or kiosks received higher visual evaluations from

visitors than those without. Conversely, poorly designed or dilapidated furniture negatively impacted the aesthetic impression in some parts of the park. However, the results indicated that the presence of seating enhanced visitors' comfort and encouraged relaxation and social interaction, even in cases where the design was simple.

We conclude that providing basic functional elements such as benches and umbrellas can have added aesthetic value if they are designed and positioned in a way that harmonizes with the surrounding environment. This type of detailed research demonstrates how small design details can play a role in achieving a greater balance between function and aesthetics (6). In general, international literature reflects a consensus that successful urban parks are those that both satisfy the senses and fulfill needs. They are visually appealing spaces, both in terms of natural and artistic design, and are also functionally comfortable thanks to their amenities and services. Studies also emphasize the importance of community engagement and understanding user preferences during the design process. Listening to visitor feedback enables designers to create gardens that meet the aspirations of the local community and reflect its voice, making them more vibrant and sustainable in the long term.

#### **Similarities and Differences:**

- Similarities: All studies emphasize the need to balance aesthetics and functionality in Landscape design. Providing basic amenities such as walkways, lighting, and recreational areas is essential to increasing visitor satisfaction.

- Differences: Local studies focused more on enhancing social services and allocating spaces for specific social purposes (such as facilities for women), while regional and international studies focused on improving natural amenities such as plants and water features.

Based on these comparisons, it can be concluded that successful urban parks require a combination of natural aesthetics and practical amenities, taking into account local cultural and climatic contexts.

#### **Research Gap:**

A review of previous studies reveals a clear gap in the literature on the design of open national parks, especially in local contexts such as Iraq. Although studies have addressed the aesthetic and functional aspects of parks in various regions, most of these studies have not directly linked local user preferences to the overall design of urban parks within the specific climatic and cultural contexts of each region. Most studies have addressed specific design aspects, such as improving facilities and services or increasing green spaces, but have not adequately addressed the balance between aesthetics and functionality within a single framework that encompasses all elements (aesthetic, functional, environmental, and cultural). Likewise, local studies in Iraq have shown a lack of research addressing the impact of design on local community development and the cultural considerations of garden users. This highlights the need for field studies focusing on in-depth surveys and a comprehensive analysis of local residents' opinions. Furthermore, there are no studies that shed light on the relationship between special social facilities (such as spaces allocated for women or cultural events) and the aesthetic aspects of the space, indicating the need to

explore how to integrate these elements into Landscape design in line with the social and cultural needs of the local community.

Thus, these research gaps leave a need for further studies that balance functional aesthetics and social interaction in the design of urban parks, especially in Arab countries like Iraq.

**Applied Framework**

**Research Methodology and Tools**

In order to understand how to achieve the desired balance between aesthetics and functionality in the design of urban parks within the Iraqi context, an applied research methodology was adopted that combines descriptive and analytical approaches. The study surveyed a sample of visitors to three major public parks in Iraq, selected to represent geographical and cultural diversity: Al-Zawraa Park in Baghdad, the capital's largest and most visited park; Basra Public Park (Basra Lights Village) in southern Iraq, with its hot climate; and Sami Abdulrahman Park in Erbil, in the Kurdistan Region, with its cultural specificity. A questionnaire was used to collect data

primarily from visitors, along with field observations to evaluate specific design characteristics. The questionnaire was designed using a five-point Likert scale to measure respondents' satisfaction with a range of aesthetic and functional elements in the urban parks under study. We were careful to include questions covering various aspects of the design, from the overall aesthetic impression to details of facilities and services. The questionnaire included two main sections: the first section included questions related to aesthetic aspects, such as: evaluating the aesthetics of the plant arrangement and landscape, the extent to which the design harmonizes with the local environment, and the visual and Psychological well-being / Emotional resonance of the urban parks. The second section included questions about functional aspects, such as: the adequacy of facilities such as seating and restrooms, ease of access and movement within the urban parks, the level of cleanliness and maintenance, and the feeling of safety while in the urban parks.

Table 1: Questionnaire sections

<b>Aesthetic aspects</b>	Assessment of the aesthetic appeal of the landscaping and plant design -
	The degree to which the design harmonizes with the local environment -
	The level of visual and Psychological well-being / Emotional resonance - provided by the garden
<b>Functional aspects</b>	The adequacy of facilities such as benches and restrooms -
	Ease of access and movement within the park -
	Level of cleanliness and maintenance -
	Feeling of safety while in the park -

coding and cleaning process to eliminate incomplete responses. A total of 270 valid questionnaires were ultimately obtained for analysis (90 per site on average)

Some demographic information about the participants (age, gender, park visit frequency) was also collected to verify whether preferences were related to visitor characteristics. A total of 300 questionnaires were distributed (100 per park), conducted during weekdays and weekends to ensure a variety of visitor conditions. After collecting the questionnaires, the data underwent a

**Table 2: Demographic Information**

<b>Age</b>	Diverse age groups
<b>Gender</b>	Balanced distribution between males and females
<b>Park visit frequency</b>	Frequency of park visits among survey participants

Illumination, etc.) to compare these with user opinions.

The quantitative analysis relied on calculating percentages and frequencies of responses to each question, in addition to calculating average ratings for each design element in question (on a scale of 1 to 5, where 1 = very dissatisfied and 5 = very satisfied). Pearson's correlation coefficient was used to measure the correlation between the ratings of aesthetic and functional elements, with the aim of testing the research hypothesis that there is a strong positive correlation between the aesthetic and functional success of the garden. The field observation tool was an observation form for the researcher to record observations about the actual condition of the design elements (such as the cleanliness of the paths, the condition of the plants, the availability of Lighting systems /

**Table 3: Quantitative Analysis Methodology in the Research**

<b>Percentages and frequencies</b>	Calculate the percentages and frequencies of responses for each question in the survey.
<b>Calculating average ratings</b>	Calculate the average rating for each design element on a scale of 1 to 5 (1 = not at all satisfied, 5 = very satisfied).
<b>Pearson correlation coefficient</b>	Measure the correlation between the ratings of aesthetic and functional elements to test the research hypothesis regarding a positive relationship between aesthetics and functionality.
<b>Field observation tool</b>	Use an observation form to document the researcher's observations of the actual condition of the design elements (cleanliness of pathways, condition of plantings, availability of Lighting systems / Illumination, etc.) for comparison with user opinions.

suitability of paths for strollers and wheelchairs), and so on. The questionnaire also included an open-ended question allowing participants to list their most prominent suggestions for improving the park, enriching the results with data quality. Paper questionnaires were distributed by volunteers at the gardens' entrances and at gathering areas (such as near playgrounds and cafes), after participants were briefly briefed on the research objective and assured of the confidentiality of their answers. The data collection process took approximately two weeks during April and May, when the weather was moderate and suitable for outdoor activities. The sample was balanced in terms of gender (approximately 55% male, 45% female) and included diverse age groups (30% under 30 years old, 50% between 30 and 50 years old, and 20% over 50 years old).

#### **Questionnaire Design and Data Collection**

The questionnaire was designed after a review of relevant literature to ensure comprehensiveness. An initial list of questions was prepared based on factors that were repeatedly highlighted in the literature (such as those mentioned in studies in Saudi Arabia and Australia). The questions were then presented to a small focus group of five garden visitors and two architecture specialists to assess their clarity and comprehensiveness. Some modifications were made based on their feedback (such as adding a question about visitor satisfaction with cultural events and activities, if any, in the garden). The final questionnaire consisted of 20 main questions. These questions were divided into subcategories, for example: a question about visitor satisfaction with the beauty of the landscape (trees, flowers, green spaces), followed by a question about the beauty of the architectural elements in the garden (general composition, fountains, paved paths). The functional section included a question about the adequacy of public facilities (restrooms, benches, playgrounds), followed by a question about the ease of movement and access within the urban parks (including the

**Table 4: Questionnaire Design and Data Collection**

2	Do you find the public facilities in the park adequate?	Closed	Yes / No / Somewhat
3	Are the pathways in the park suitable for walking?	Closed	Yes / No / Somewhat
4	Would you prefer to have more benches in the park?	closed	Yes / No / Somewhat
5	Do you feel safe while in the park?	Closed	Yes / No / Somewhat
6	Do you find the park's lighting adequate at night?	Closed	Yes / No / Somewhat
7	Is there enough shade in the park?	Closed	Yes / No / Somewhat
8	Are there designated areas for cultural or recreational activities?	Closed	Yes / No / Somewhat
9	Do you feel that the park respects social privacy?	Closed	Yes / No / Somewhat
10	Were the restrooms clean during your visit?	Closed	Yes / No / Somewhat
11	Are you satisfied with the overall design and aesthetics of the park?	Closed	Yes / No / Somewhat
12	Do you find the design of the pathways in the park suitable for pedestrians?	Closed	Yes / No / Somewhat
13	Are there pathways specifically designed for people with disabilities?	Closed	Yes / No / Somewhat
14	Do you find the park generally clean?	Closed	Yes / No / Somewhat
15	Do you feel comfortable while relaxing in the park?	Closed	Yes / No / Somewhat
16	Do you find the play areas suitable for children?	Closed	Yes / No / Somewhat
17	Do you consider the area surrounding the park to be attractive?	Closed	Yes / No / Somewhat
18	Are there enough parking spaces?	Closed	Yes / No / Somewhat
19	Does the park provide a suitable environment for social interaction?	Closed	Yes / No / Somewhat
20	Are there any improvements you think are necessary for the park?	Opend	-

the lack of transportation carts or the tiring nature of some long paths. Regarding maintenance and general cleanliness, the average rating was around 3.5/5, indicating moderate satisfaction, with requests for improved cleanliness of some facilities and regular pruning of plants. Finally, the feeling of safety within the gardens was average (3.6/5), and it varied between locations. Visitors to Erbil Park felt safer than those to Basra Park, for example, some of whom expressed slight concerns about Lighting systems / Illumination or the presence of loiterers. Table (5) shows:

**Survey Results and Analysis**

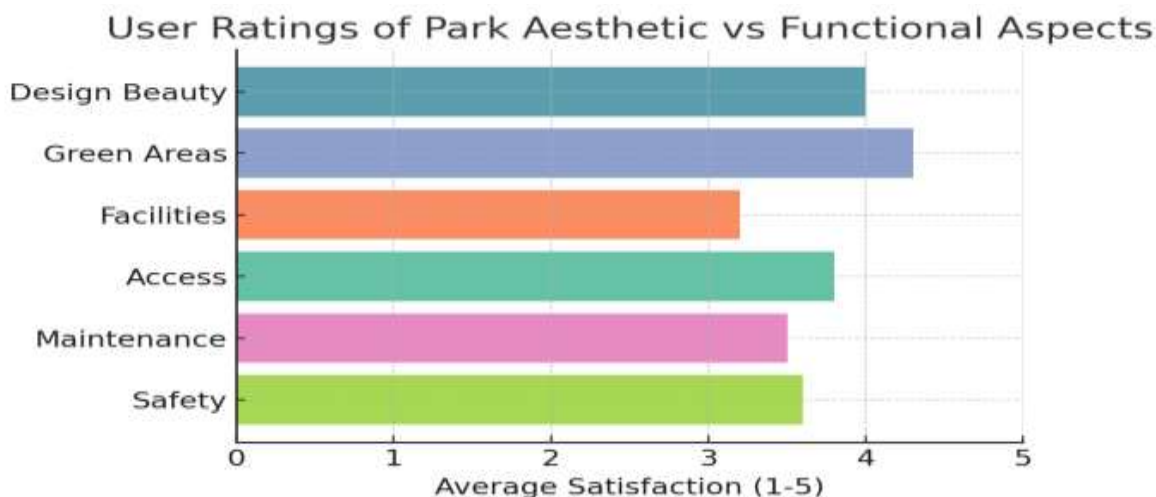
The quantitative results derived from the surveys revealed a comprehensive picture of visitors' evaluations of the aesthetic and functional aspects of the three urban parks under study. Overall, impressions were fairly positive regarding the aesthetic aspects of the gardens, while there were some more notable reservations regarding the functional and service aspects. For example, participants' average rating of the overall beauty of the Landscape design (in terms of landscaping and views) was approximately 4.0 out of 5, indicating good satisfaction. Visitors also rated the abundance of green spaces and trees relatively highly (average ~4.3/5), with many praising the abundant shade and beautiful landscapes, particularly in Al-Zawraa and Erbil parks. In contrast, the availability of facilities and services received a lower average rating (approximately 3.2/5), with a significant number of participants expressing their complete dissatisfaction with the adequacy and cleanliness of the restrooms, in particular, and the lack of seating in some areas. Ease of access and movement within the gardens was rated fairly good (3.8/5). Most participants reported that the paths were clear and connected, but some—especially the elderly—complained about

**Table 5: Survey results and analysis**

<b>Criteria</b>	<b>Average rating (out of 5)</b>	<b>Observations:</b>
<b>Aesthetic appeal of the overall design (layout and landscaping)</b>	4.0	Visitors expressed overall satisfaction with the design.
<b>Abundance of green spaces and trees</b>	4.3	High levels of satisfaction were noted, particularly in the Al-Zorrah and Erbil gardens.
<b>Availability of facilities and services</b>	3.2	Lower ratings were attributed to the lack of restrooms and seating areas.

<b>Ease of access and movement within the park</b>	3.8	Paths were well-maintained, but some complaints were raised regarding accessibility for elderly visitors.
<b>Maintenance and overall cleanliness</b>	3.5	Overall satisfaction was moderate, with requests for improvements in cleanliness and landscaping.
<b>Sense of security</b>	3.6	Security varied between different gardens, with concerns raised about inadequate nighttime lighting in some areas.

The above rates can be summarized to evaluate the different aspects as shown in the following figure, which highlights the averages of users' satisfaction (on a scale of 1–5) with the aesthetic elements versus the functional elements in the urban parks under study.



**Fig.3. Ratings of visitors for aesthetic aspects**

facilities and maintenance, while the remaining elements remain at acceptable levels.

A correlation coefficient was also calculated between each participant's average overall

Figure3. showed the average ratings of visitors for aesthetic aspects (in blue) versus functional aspects (in orange/green) in the urban parks studied. User satisfaction with the aesthetics of the design and green spaces is higher than with the availability of

cleanliness of some facilities (especially restrooms) or the occasional accumulation of dirt in the garden spoils the beauty of the landscape and discourages them from repeating visits. Conversely, approximately 30% stated that the natural beauty and orderliness of the garden sometimes make them overlook the lack of certain services. This indicates that there is a relative flexibility among users, which can lead them to forgive some functional shortcomings if the aesthetic impression is very strong. Conversely, excellent functionality can mitigate the impact of a weak aesthetic design, but the ideal situation remains achieving both.

aesthetic rating (as the average of their ratings for the aesthetic elements) and their average overall functional rating. The Pearson correlation coefficient was found to be approximately 0.62 (significant at the 0.01 level), indicating a strong, moderate positive correlation between the two aspects. That is, the higher a visitor's rating of the urban parks beauty and visual harmony, the higher their ratings for ease of use and services—and vice versa. This supports the hypothesis that aesthetics enhance functionality and vice versa, as a satisfactory experience in one reflects positively on the user's perception of the other. However, when we delve deeper into the details, we find specific aspects that can negatively impact this balance if neglected. For example, 45% of respondents to the open-ended question stated that the lack of

**Table 6: Pearson's Correlation Coefficient Results Between Aesthetic and Functional Evaluations**

<b>Overall aesthetic evaluation</b>	0.62	There is a moderate positive correlation between aesthetic and functional ratings (significant at the 0.01 level).
<b>Overall functional evaluation</b>	0.62	The higher the aesthetic rating, the higher the functional rating, and vice versa.
<b>Impact on balance</b>	---	Aesthetics enhance functionality and vice versa, but neglecting functional details can negatively impact the balance between the two.

When comparing the results between the three urban parks, some noteworthy differences emerged. For example, Erbil Park (Sami Abdulrahman) received the highest overall aesthetic and functional rating, with visitors praising its beautiful landscaping, abundant flower gardens, and water features, as well as its high cleanliness and shaded seating areas. This may be attributed to the park's relative newness and the clear administrative attention it receives. Al-Zawraa Park in Baghdad received a very good aesthetic rating due to its lake, amusement park, and diverse natural landscapes, but it faced criticism regarding overcrowding on holidays and the lack of some facilities for the large number of visitors (for example, the toilets are sometimes insufficient). Meanwhile, Basra Public Park (Basra Lights Village) received a relatively lower rating, particularly in aesthetics, perhaps due to its lack of significant natural diversity and its design's reliance on open grassy spaces rather than diverse aesthetic perspectives. Furthermore, the hot climate affects the flowering of its plants. Basra Park users reported a need for more landscaping and

### Conclusion

In conclusion, this research emphasizes the importance of balancing aesthetic and functional aspects in the design of urban parks. These urban parks significantly contribute to improving the quality of urban life by providing green environments that offer opportunities for social recreation and physical activity. The results of an applied study of three major urban parks in Iraq also showed that visitors highly valued aesthetic aspects, such as plant arrangement and landscaping, but expressed concerns about functional aspects related to facilities and services. Data analysis confirmed a strong positive relationship between aesthetic and functional evaluations of gardens, reinforcing the hypothesis that enhancing aesthetics enhances the functional experience, and vice versa.

more shade due to the intense summer sun. This suggests an imbalance in favor of functional aspects (large open spaces used for events, for example) at the expense of aesthetics and climatic comfort. These internal comparisons between Iraqi gardens confirm that the climatic and cultural context of each city influences visitors' expectations and evaluations, and therefore must be Considered in design recommendations.

Overall, the results of the applied study highlight that urban park users in Iraq are aware of the importance of valuing both aesthetic and functional aspects. They praise a beautifully landscaped garden, but they are also quick to point out practical shortcomings that impede their comfort. This confirms that the success of any urban parks development or construction project must take a holistic view of all these aspects. In the following section, we draw conclusions and recommendations based on the theoretical framework, studies, and applied findings.

The study recommends enhancing the aesthetic aspects of urban parks by increasing afforestation, providing natural elements such as water features, and improving services and facilities such as restrooms and seating. Safety and Lighting systems / Illumination should also be improved to ensure visitor comfort and safety. Additionally, the local cultural design of urban parks should reflect local identity and enhance the social experience of users. Finally, the study emphasizes the importance of involving the local community in the design process to ensure their actual needs are met and to increase satisfaction with urban parks. By adopting these recommendations, Major public parks in Iraq and other Arab countries can achieve the ideal balance between aesthetics and functionality, making them attractive and beneficial places for the

community, contributing to individual well-being, and enhancing the overall urban experience.

### Recommendations

The study as a whole—both theoretically and practically—points to a fundamental fact: function and beauty are complementary aspects of the design of urban parks. A positive and sustainable user experience cannot be achieved unless aesthetic considerations (such as attractive landscaping and a unique visual identity) are integrated with functional needs (such as services, accessibility, and safety) from the early stages of garden planning and design. The theoretical framework demonstrated that global urban design concepts have long emphasized this integration, and that neglecting any aspect results in spaces that may be aesthetically pleasing but impractical, or functional but lack appeal and motivation to visit. A review of previous studies—both in Iraq, the region, and internationally—also highlighted that the best-rated gardens are those that successfully satisfy visitors' aesthetic and functional aspirations. For example, users in Arab and international studies praised the natural beauty and shade in gardens to the same extent as they valued the presence of facilities and services; both increase satisfaction and benefit. The results of the field study in Iraq, in turn, confirmed that local garden patrons value aesthetic elements (such as green spaces and fountains) but also demand improved service aspects (such as cleanliness and toilets). This indicates gaps that relevant authorities (such as city secretariats and municipalities) can address through comprehensive development plans. Accordingly, the study recommends the following:

- Adopting a participatory design approach: Involving the local community and garden patrons in the planning process through surveys or workshops, to explore their preferences and ensure that the final design reflects their actual needs for aesthetics and

functionality. Listening to people's opinions has been shown to contribute to creating more usable and acceptable gardens.

- Enhancing local natural elements: It is recommended to increase green spaces and plant trees with species appropriate to the local climate in Iraqi urban parks, while ensuring proper irrigation and maintenance, as this has a dual aesthetic and functional effect (modifying the atmosphere). It is also preferable to incorporate water features such as fountains or small ponds whenever possible, as they add beauty, attract visitors, and provide some refreshment in hot weather.
- Developing and improving facilities and services: The number of restrooms in large gardens should be increased and their distribution ensured, along with a strict periodic maintenance plan to maintain cleanliness. A sufficient number of wastebaskets should be provided throughout the urban parks to encourage cleanliness. It is also advisable to provide seating and sufficient shade along walkways and in open spaces so that visitors can find a place to rest wherever they go .
- Improving safety and security factors: By enhancing lighting in garden paths, parking lots, and entrances, especially at night, and providing security elements (such as surveillance cameras or guard patrols when necessary) to provide reassurance to visitors. Safety should also be addressed in playgrounds and children's play areas through regular inspections of the condition of equipment. A safe environment encourages people to come and spend more time, maximizing the benefits of the garden.
- Emphasizing the cultural aesthetic dimension: This includes incorporating design elements that reflect local identity and Iraqi culture, such as placing artistic sculptures inspired by heritage, or designing gates and canopies with a local architectural touch. These details enhance the community's connection to the place and add aesthetic distinction. At the same time, they can be

functional (such as sculptures that become benches or umbrellas).

• Continuous monitoring and evaluation: Finally, the study recommends that garden management conduct periodic evaluations of visitor feedback—perhaps annually—to measure satisfaction with aesthetics and functionality, and to monitor any new issues or changes in usage preferences over time. This feedback mechanism helps drive continuous improvements and keeps gardens in top condition. A successful urban park is one designed and managed with a mindset of integration and balance. Trees, paths, benches, and fountains are not viewed as separate

elements, but rather as a single system designed to create a rich, attractive, and comfortable spatial experience for all. Through sound planning based on scientific principles and a participatory methodology, cities in Iraq and elsewhere can achieve public parks and gardens that truly embody the desired balance between function and beauty. These gardens can become urban oases where human health and well-being flourish alongside the environment and spatial aesthetics

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