



Design Improvements of Shahrekord Mellat Park for Better Citizen Utilization

Fazlollah Pezhvak^{1,*} and Ahmad Ghazali²

¹Faculty of Agriculture, Department of Horticulture, Raman Agricultural and Natural Resources University, Ahvaz, Iran.

²Graduated Master Raman Agricultural and Natural Resources University, Ahvaz, Iran.

ARTICLE INFO

Article history:

Received: 15 January 2019;

Received in revised form:

11 February 2019;

Accepted: 21 February 2019;

Keywords

Design Improvement

Landscape

Urban Park

Shahrekord Mellat Park

ABSTRACT

Urban sprawl, the changed lifestyle and urbanization requires landscaping as an essential factor. Urban landscape is so important that it is currently considered as an indicator of development. Unresponsive urban parks to meet the needs of most citizens and lack of facilities and services leads to elimination of deficiencies in an urban park, often referred to as design improvement. Due to its significance as well as the lack of relevant studies, design development should be given more attention. The purpose of this study was to evaluate Shahrekord Mellat Park qualitatively and quantitatively by a documentary-analytic survey. Majority of data was collected by questionnaires distributed among users of the park. Finally, data was analysed. The findings suggest that factors such as lack of facilities and furniture, lack of vegetation, lack of social security and mismanagement of the park reduce the willingness of citizens to use these areas. Finally, suggestions were made for design improvement of Shahrekord Mellat Park.

© 2019 Elixir All rights reserved.

Introduction

Urban sprawl, the changed lifestyle and urbanization requires landscaping as an essential factor. Infrastructures of the modern system of metropolitans are no exception; the changes made in shape, texture and lifestyle of residents increasingly reduce urban landscapes. Constructions and human manipulation in urban environments have adverse effects on the environment such as vegetation, water, light and earth. The pollutants increasingly cause diseases and major problems in the city. Under these conditions, green architecture plays an important role in providing beauty and comfort, refining the air, reducing noise pollution and finally providing calm and relaxation for residents. Urban parks refine the air and greatly reduce pollutions from fuel and other pollutants; they also act as noise filter for their adjacent residents [1].

Unresponsive urban parks to meet the needs of most citizens and lack of facilities and services leads to elimination of deficiencies in an urban park, often referred to as redesign or design improvement. Due to its significance as well as the lack of relevant studies, design development should be given more attention. Due to the growing trend of urban parks in Iran, it is required to consider redesign in order to eliminate shortcomings of the design in accordance with the needs of users and requirements of the environmental conditions. However, a glance at the redesigning process of parks shows that the balance between ecological and social functions is neglected in most cases and deficiencies are resolved partially only by adding functions to the park and local changes. This damages the park as a whole and quality of its functions and threatens the structure of the entire design [2].

Theoretical Background

Generally, designing process is a cyclical and reviewing trend. In other words, this process starts from creation and definition of the problem to implementation followed by

evaluation, which can itself lead to a new problem. Park design process is not an exception; evaluation of this process can lead to definition or evaluation of existing problems and finally to redesign (review) or elimination of flaws and defects [2].

In evaluation of an implemented park, existing flaws are defined as a new problem over time. These flaws are often due to shortcomings in the initial design and sometimes due to the changes in external conditions such as environmental and social conditions. Therefore, flaws are inevitable in parks due to a dynamic and continuous factor, i.e. time, in which all changes happen and due to potential deficiencies in the original design. Hence, it is always essential to eliminate these deficiencies in all parks [2].

Problem Statement

The area studied here is the Shahrekord Mellat Park. The main reason for this selection is experiences of available studies conducted in Shahrekord. Due to its specific geographical position and climate, citizens cannot use public areas of the city (parks and urban landscapes) for more than four months (from mid-spring to late summer). However, studies show that over 50% of citizens are less likely to use these areas for their leisure time, cultural and sport activities etc. [3]. This lack of tendency which results in less citizen utilization is the focus of the present study.

Hypotheses

Following hypotheses were developed to define the methodology and respond to main questions of the study:

1. It seems feasible to balance ecological and social functions of the park and eliminate its flaws.
2. It seems feasible to increase citizen satisfaction with current conditions and facilities of the park to attract more citizens to urban parks (in line with sustainable urban development).

3. It seems feasible to meet the criteria of redesign to optimize efficiency, protect and restore urban parks in order to provide space for various activities for all age groups.

Questions

For redesign or design improvement of parks, following questions can be taken into consideration:

1. Considering the needs of users, what standards and criteria are proposed for improving the design of urban parks?
2. Considering the successful international experiences in redesign of urban parks, what criteria are proposed for redesign of parks?
3. Can regulations related to European and American children parks apply in Iran?

Overall Objectives

The overall objectives of this study are to analyze findings of the questionnaires, define criteria for redesign of urban parks using qualitative evaluation and provide design improvement solutions for of Shahrekord Mellat Park as a case study.

To achieve overall objectives, the following sub-objectives are considered:

- Qualitative evaluation of the park, evaluation of its flaws and problems from the perspective of citizens using questionnaire
- Extraction of redesign criteria for urban parks based on relevant theories and experiences
- Application of data using qualitative observations and field studies

Literature Review

Oguz (2000) performed a survey of urban park users in Ankara and concluded that urban park users were 19-44 years old, single, male, from middle-income group. Moreover, quality services were more important than other types of services for users of urban parks in Ankara [4].

Ismaili (2002) analyzed landscape architecture of urban parks in districts 1 and 8 of Tabriz. He provided suggestions for locating new urban parks based on urban spatial structure and type of land-use [5]

Evaluated the furniture of urban parks in Golbahar city and concluded that the improved performance of park furniture increased the tendency to re-use the park [6]

The studied park

Extending in an area of 75 hectares, Mellat Park is one of the oldest parks of Shahrekord (Fig. 1). This park was once the city cemetery which was transformed to public green space with the expansion of the city; currently, it is used as garden tomb. The park was previously located in the eastern margin of the city; however, it is now located almost in the center due to the development of the city. The most important tree species include ash, acacia, elm, redbud and conifers. This park matches the mountainous topography of the area. Beautiful views of the cities can be seen from heights. The facilities of the park include amusement park, buffet, traditional teashop, playgrounds and beautiful long waterfronts [3].

As in other Iranian parks, individual interventions have been made to alleviate flaws of the park; these individual and local interventions include:

- Replacing old flooring of the playground by secure and resilient flooring
- Adding new public toilets
- Installing new benches and trash cans
- Adding lampposts in dark spots
- Improving flooring and replacing the old one by higher quality materials

These interventions have been done without considering any certain context and the relationships between various elements of the park. Thus, this have disturbed the integrity of the park and threatened its general view over time.



Figure 1. Aerial image of Shahrekord and Mellat Park. Source: Google earth.

Spatial criteria of urban parks

One of the features of urban parks is that they provide a set of activities for users. Parks are places which can be easily accessed; surrounding areas can be accessed through them (access and communication). Parks are safe, clean and attractive places. Perhaps, the most important feature of parks is that they provide a place where people can meet with each other (sociability). Tak Park Newsletter published by Urban Park Institute has listed the criteria of a good park:

- Activities and applications
- Access and communication
- Comfort and image
- Sociability

One of the four types of functions intended for cities in the Athens Charter is recreation for which urban parks are required as essential elements [7]. In locating these elements which are categorized on the basis of capacity, size, spatial attraction and radius of availability, it is important to consider the following factors [8].

- Accessibility: the park should be available for all classes of the society.
- Safe access: public parks should be accessible for all classes of the society with different age and gender.
- Centralization: parks should be located in urban centers, including community centers, regional centers and urban areas.

Another important factor in locating urban landscapes and parks is its social necessity. The contemporary urban critic Jane Jacobs believes that the park should be in a place where is full of life, culture and commercial activity [8]. In addition, access to communication network and visual utilization of park scenery are features of a well-located park. It is also essential to consider activities and functions (elements) of the located parks. The best parks are those which consider social, cultural, psychological and spiritual needs of users with different age groups and gender; provide attractive, desirable and diverse atmosphere; and consider safety (in playground devices, social and psychological safety) as an important factor in attractiveness of parks [9]. Table 1 lists the requirements of an urban park.

Table 1. Requirements of a large park [9].

Requirements	Description
Furniture	Bench, trash can, information panels, access map, drinking water, lighting, pavilions, fountain, statues and elements, scrolls, fence
Vegetation	Trees, shrubs, plants, seasonal flowers, cover plants, hedging plants
Buildings	Library, exhibition halls, amphitheater, administrative buildings, workers room
Welfare facilities	Public toilet, buffet, coffee shop
Service Equipment	Powerhouse, warehouse, greenhouse
Playgrounds	Volleyball, basketball, tennis, badminton, skating, children's playground

Materials and Methods

The methodology used in this study was a documentary-analytic survey. Data was collected by reviewing the existing documents by archival and field studies and understanding the physical condition of the park through questionnaires distributed among users.

In this study, the data required for theories, experiences and the studied park was collected by archival studies by reviewing textbooks, papers, some valid online sources, reports and documents available in the Department of Parks and Urban Landscapes and Municipalities. Due to lack of adequate documentation regarding the studied park, data was mainly collected by field studies. This data included information on natural and artificial elements, functional features and landscaping architecture of the parks. The data related to uses included demographics, their needs and preferences and opinions about quality and quantity of elements in the park.

The sample size was estimated at 120 users; questionnaires were distributed randomly at certain times of day in a week in different parts of the park. Responses of users were then analyzed. Finally, solutions were provided for design improvement of the Shahrekord Mellat Park to solve problems for better citizen utilization.

Results

Social data was analyzed for different age groups, gender, education, intention, flaws and citizen satisfaction and the results were analyzed.

Age, gender and education

The studied age groups included people under 20, 20-39, 40-59 and 60 and older. Education of participants included secondary education and lower, BA, MA and PhD. In this regard, 68% of users aged 20-39 years; 52% were men and the rest women. Table 2 shows the distribution of gender, education and age groups of users.

Analyses showed that 43% of users had secondary education or lower and 38% had a bachelor's degree. Moreover, only 19% of users had a master's degree and above.

Table 2. Distribution of age, gender and education of users.

Gender	Questionnaire	<20	20-39	40-59	>60	Secondary	BA	MA	Ph.D.
Male	64	7	42	8	7	34	21	8	1
Female	56	8	40	5	3	17	25	11	3
Total	120	15	82	13	10	51	46	19	4

Intention of users

Intention is one of the main drivers of users. Naturally, this factor varies between different age groups and genders. Table (3) shows the intention of users of Shahrekord Mellat Park.

Table 3. Intention of users in Shahrekord Mellat Park.

Intention	Walking	Children playground	Meeting	Recreation	Sports	Total
Male	6	1	3	48	7	64
Female	7	16	2	21	9	56
Total	13	17	5	69	16	120

Obviously, the most important intention of users (58%) is recreation. It is noteworthy that users with different age groups and genders have different intentions to use the park. People who are under 15 years mainly use parks for sports and exercise; housewives go to park to accompany their children. Interestingly, people are less likely to use parks for meetings, despite the fact that this is one the most important features of parks [10].

Flaws of the park from perspective of citizens

This study evaluated flaws of the park in elements, furniture, facilities and vegetation from the perspective of users. Table 4 lists the results.

The notable point is the lack of vegetation and plantation, lack of furniture and ATM. This means that conditions of different social groups (specific age, sex, physical and mental requirements) are not considered in design of these spaces. Moreover, other notable flaws include the existence of blind spots in most parts of the park, lack of proper lighting and lack of security in the park.

Satisfaction of users

Table 5 evaluates the satisfaction of users to determine the optimal solution in terms of facilities, vegetation and requirements of the park.

Table 4. Flaws of the Shahrekord Mellat Park.

	Furniture					
	Pavilions and canopies	Barbecue	ATM	Furniture (benches and trash cans)	Water fountains and fountains	Buffet and coffee shop
Responses	43	18	59	35	26	18
	Vegetation					
	Shady trees	Ornamental shrubs	Ornamental and seasonal flowers	Cover plants and grass	Hedge	Twisting plants
Responses	27	61	57	42	23	39

As shown in the table, the weakest level of satisfaction is related to management of park involving cleanness, security, supervision and guidance. These results reflect the relative satisfaction of citizens with facilities and furniture of the park.

Table 5. Citizen Satisfaction in Shahrekord Mellat Park.

Satisfaction (%)	Excellent	Good	Average	Weak	Total (%)
Furniture and facilities	6	53	32	9	100
Vegetation	8	34	39	19	100
Management	12	24	41	23	100

Conclusion

Accordingly, public green space and parks are necessities of urbanization and meet ecological, psychological, social and cultural requirements of citizens. Hence, efforts should be made to maintain and enhance the performance and efficiency of these areas. Realizing the significance of the problem, this study identifies the criteria of design improvement for urban parks using qualitative evaluations in order to optimize the efficiency of urban parks.

Data analysis showed that, citizens are more likely to use parks if improvements are made in facilities, vegetation, security, cleanness of the park. In this study, 76% of users expressed their consent to pay entrance fee. Finally, following solutions are presented for redesign improvement of Shahrekord Mellat Park for better citizen utilization:

Qualitative and quantitative improvement of natural elements: According to analysis, the most important reasons of citizens for using the park were vegetation (including cover crops, trees and shrubs, seasonal flowers, etc.) and natural elements (including fountain, slate overlays, etc.); therefore, quantitative and qualitative improvement of these elements are considered as the main solutions for increasing the satisfaction of citizens.

Qualitative and quantitative improvement of artificial elements: lack of adequate artificial elements is a major concern reducing satisfaction of users. Qualitative and quantitative improvement of furniture (including benches, lighting, trash cans, water fountains, pavilions, fitness devices, etc.), welfare facilities and services (including public toilets, buffet, coffee shops, etc.) can attract larger groups of users.

Improved social security: both safety of park facilities and social-mental security are always known as repellent of population groups.

With regard to standards required by amusement park equipment, socio-psychological security and safety of parks can be improved to attract more users.

Improved landscape: landscape architecture (including colorful curbs, information panels, cleanness, etc.) causes place attachment and thus higher utilization of parks by users.

Improvement of cultural facilities: cultural facilities increase the level of citizen satisfaction with parks. Public libraries for various age and gender groups, exhibitions, comedy shows, and different cultural, artistic and sporting events can be useful to attract users.

Reference

- [1]H. Majnunian, Discussions about parks, green spaces and promenades. Department of parks and green spaces of Tehran city-Iran press, 251 pp. 1995
- [2]P.Baghaiee, and M.R. Leylian, Evaluation and Optimization of Models' Priorities in Redesigning of Urban Parks in Semi-Mountainous Areas. *Asian Social Science* 12(12):43 · October 2016
- [3]M.J.Mohammadi, Qualitative Evaluation of urban green space and optimization of benefits for its citizens, *Shahrekord, ecology*, 33rd year, No. 44.2007.
- [4]D. Oguz, User surveys of Ankara's urban parks. *Landscape and Urban Planning* 52(2):165-171 · December 2000
- [5]A. Ismaili, analysis of green spaces (parks), according to city planning Case study: Districts of one and eight in Tabriz, master's thesis, Tarbiyat Moddares, the Faculty of Arts. 2002
- [6]H. Varesi, M. Amel Bafandeh, and M. Mohammad Zadeh, Considering and analyzing the components of urban identity and their relationship with the belonging sense to place of residents of new cities (sample: Golbahar city). *Journal of Research and Urban Planning*, 1(2). 2010
- [7]M.R. Poormohamadi, urban land-use planning. SAMT Publications Tehran. 2003.
- [8]S.A.aeednia, urban planning; green book of municipalities. Tehran: research center of urban planning. 2004.
- [9]M. Salehi-Fard, An Analysis of The Social Dimensions of Urban Green Spaces. With An Emphasis on Citizens View. *Geographical Space*. Tenth Issue. Issue: 29: 51-93. 2010
- [10]Chiesura, A. 2003. The role of urban park for the sustainable city, Wageningen University Journal of urban planning vol.36.