

RELATIONSHIP BETWEEN THE LANDSCAPE PROPERTIES AND USER SATISFACTION IN THE MOSQUE GARDENS: A CASE STUDY FROM ISTANBUL

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Abstract

Gardens are of physical as well as symbolic importance for Muslim people. Gardens being quiet places are conducive to concentration, a prerequisite for genuine prayer. Consequently became one of the most favorable sites for locating mosques. When reading sources about gardens of mosques, little detail is provided about the activities which occurred during these events. This study provides details that focus predominantly on the landscape design description of the visited religious buildings, such as mosques and religious schools. For this purpose, selected samples of mosques gardens in the city of Istanbul, the base elements, the containment elements, reinforcement elements, and open green spaces were explored in terms of landscape design principles in accordance with suitability and determined deficiencies. In this study, the method of scoring was used for the evaluation of mosques gardens. Gardens of mosques classified in terms of its location, closeness to the environment, accessibility, activity areas, microclimatic conditions, water elements, plants materials and vista, whether or not the garden, landscape design, safety situation, comfort and facility. The gardens of mosques are compared to each other according to the scores they have received, and thus the positive and negative aspects of each mosques' gardens have been revealed in this research.

Keywords: Istanbul, mosque, garden, landscape design

Word Count: 3183

AIMS AND BACKGROUND

Mosques are one of the institutions in the Islamic community that is central to the social, political and cultural services for believers and plays an important role in the cultural development of the Islamic community (Karaca, 2014).

Mosques are depended on foundations, and they are at the head of religious works as architectural structures. Mosques are sacred places in the Muslim geography, both religious and artistic. Mosques were used not only as places of worship but also they were used as a religious education place for Muslims. Mosques are versatile spaces that reflect the period we live in. Mosques, which also have functions that unite and integrate our society, are of great importance for Muslims. The landscape design of the courtyards and the gardens of the mosques are as important as the architectural designs of mosques. For this reason, it is necessary to identify and develop the deficiencies in the current situation in the gardens that are as important as the buildings of the mosques.

EXPERIMENTAL

In this research, structural and vegetal landscape features of Beşiktaş Sinanpaşa Mosque, Ortaköy Büyük Mecidiye Mosque and Ortaköy Küçük Mecidiye Mosque gardens have examined and the satisfaction level of the users from these gardens has been investigated.

The mosques have been analyzed in terms of natural, perceptual and socio-cultural factors and the total

percentage of success for each garden has been calculated using the scoring method (scoring from 0 to 3) (Düzenli ve diğ., 2017). According to success percentages, mosque gardens are compared to each other.

Data Analysis. In the history of Islamic civilization, mosques have been the vital elements and assets in the planning and development of a township. Mosques serve as a worshipping place and a place for the Muslims to conduct other activities. Mosques do not only serve as a worshipping place, but also a center for social and economic activities for the Muslims (Yaacob ve diğ., 2017).

The open spaces at mosques are crucial in creating a quality surrounding of a mosque as a centre of worshipping. The opened spaces are focal points where the community can conduct their daily activities. The creation of open spaces is crucial for the community as a place to communicate formally and informally.

A public open space needs to consider the various classes and status of the needs of the community and also fulfils the various needs of the various level of the community from the rich to the poor and from the young until the old (Utaberta ve diğ., 2015). The mosque gardens have been examined from the natural factors in terms of the topographic state of the area, the existing plant species in the area and climatic factors. The mosque gardens have been examined from the perceptual factors such as noise, important visual fields (vista points), dominant view and perceptual factors.

The mosque gardens have been examined from cultural factors such as border elements, entrance points, pedestrian circulation within the area, parking lots and existing structural units (fountain, pool, lighting, ladder), traffic in the vicinity, current use of the area (activities) and user characteristics (age, sex, socio-economic characteristics).

As a result of the analysis made in terms of natural factors, cultural and perceptual factors; mosque gardens compared to each other according to the scores they received and each mosque garden has been positively and negatively characterized from the physical point of view. A survey has been conducted with 180 visitors in order to be able to show whether they are satisfied with the mosque garden. The importance given to the design of the mosque's buildings should also be given to the design of the exterior spaces. The examination of the mosque gardens both in terms of structural landscaping and herbal landscaping is very important for determining the suitable conditions for outdoor spaces and for determining the problems and deficiencies. For this reason, the outdoors of the mosques have been examined by taking into consideration the landscape design principles and used as an evaluation method. All of the mentioned landscape design criteria has been evaluated taking into consideration observations made in the mosque garden and interviews with mosque visitors and staff. Scores ranging from 0 to 3 were given as a result of on-site analyzes and interviews for each landscape criterion in the scoring chart. The characteristics of the natural, cultural and perceptual factors in the scoring chart are filled out with '0' if there is not in a garden of mosque, '1' if it is a few, '2' if medium, and '3' if there are too many.

The total percentage of success for each mosque garden was determined and the mosque gardens were compared to each other according to the percentage of success. For a total of 33 design criteria, the maximum points to be taken on the current positive score ($33 \times 3 = 99$) were calculated in proportion to the sum of the scores for each mosque garden.

In the second phase of the research, a survey has been conducted to reveal the views of mosque personnel and visitors about the mosque gardens. A questionnaire was applied to a total of 180 users, 60 each. In the questionnaire they were asked how satisfied they were with the mosque garden (5=very, 1=never). Thus, it is aimed to determine whether the satisfaction levels of the mosque gardens with different landscape features in terms of hard and soft landscapes are different.

The percentages according to the scoring methodology used in the evaluation of the mosque gardens are given in Tables 1, 2, 3. % 0-30 partially successful, % 30-60 successful, % 60-100 very successful were evaluated.

Table 1. Analysis of Mosque Gardens in Terms of Cultural Factors (land use, land boundaries, entry point, area pedestrian circulation, parking lots, structural units, current use of the area).

	Beşiktaş Sinanpaşa Mosque	Ortaköy Büyük Mecidiye Mosque	Ortaköy Küçük Mecidiye Mosque
Closeness to city and visibility	2	3	3
Located in the city center	3	2	2
Accessible location	2	2	2
Closeness to major road	2	2	1
Accessibility with transportation	2	3	3
Presence of a garden	1	2	3
Garden accessibility for pedestrians	1	2	3
Number of garden entrances	3	1	1
Pedestrian mobility in garden	1	1	3
Security unit	0	3	0
Security guard	2	3	0
Borders structure in the garden (walls, fences etc.)	1	3	3
Seating areas	1	3	3
Sitting group (pergola, arbor etc)	0	0	3
Sculpture	0	0	1
Direction boards	1	2	3
Water element	1	1	3
Total (100 % Achievement: 51 point)	23	33	37

Table 2. Analysis of Mosque Gardens in Terms of Perceptual Factors (Noise zone, dominant Landscape)

	Beşiktaş Sinanpaşa Mosque	Ortaköy Büyük Mecidiye Mosque	Ortaköy Küçük Mecidiye Mosque
Garden direction to a significant view	1	3	3
Noise	2	3	1
Total (100 % Achievement: 6 point)	3	6	4

Table 3. Analysis of Mosque Gardens in Terms of Natural Factors (topography, climate, existing vegetation)

	Beşiktaş Sinanpaşa Mosque	Ortaköy Büyük Mecidiye Mosque	Ortaköy Küçük Mecidiye Mosque
Slopped garden terrain	2	2	1
Stairs and ramps	2	2	1
Anthropometrically suitable stairs and ramps	2	2	3
Suitable activities for seasonal conditions	1	1	2
Slippery surfaces in winter conditions	2	3	1
Grass areas	0	0	3
Big trees	0	1	3
Plant species suitable for historic texture	0	1	3
Flowerbeds	0	1	3
Maintenance of the plants	0	1	3
Plants used with natural	0	1	3
Plant diversity	0	1	1
Flowered or fruited plants	0	0	1
Plants that border the garden	0	0	1
Total (100% Achievement: 42 point)	9	16	29

Survey Findings: Demographic structure

A total of 180 people, 60 in each mosque garden, were surveyed. A total of 180 people, 74 of whom were women, participated in the survey. 60 people from the survey are from outside Istanbul and 120 people are from Istanbul. The majority of the respondents (18-29) are 73 in the age group and 46 in the (40-59) age group (Table 4).

Table 4. Demographic Features of Visitors

Demographic features	Beşiktaş Sinanpaşa Mosque	Ortaköy Büyük Mecidiye Mosque	Ortaköy Küçük Mecidiye Mosque	Total
Female	9	33	32	74
Male	51	27	28	106
AGE				
(0-17) Age Group	-	9	4	13
(18-29) Age Group	8	33	32	73
(30-39) Age Group	4	12	12	28
(40-59) Age Group	28	6	12	46
60 age and over	20	-	-	20
Visitors from outside Istanbul	-	48	12	60
Visitors from Istanbul	60	12	48	120

Findings about the satisfaction question. Visitors' satisfaction levels were shown at table 5. The highest satisfaction rate has emerged in the Küçük Mecidiye Mosque. The evaluation of mosque gardens in the values of score card is correspond to the values of the survey results of the mosque gardens.

Küçük Mecidiye Mosque garden has the highest percentage in the terms of all criterias (location, security, equipments, green areas, water, transportation). Küçük Mecidiye Mosque garden has the highest average in terms of user satisfaction. Beşiktaş Sinanpaşa mosque garden has the lowest average in terms of user satisfaction.

Open Spaces of the Mosques. Open spaces of the mosques have been examined according to the last congregation place, portico, harim (outer courtyard), harem (inner courtyard), fountain, portal, musallam move

and Hazire (Cemetery) in the research.

Last Congregation Place. It is the portico adjacent to the Mosque in the big Mosques. One side (courtyard side) of this place is open. This place, which can be called the place of the congregation of the courtyard, is a high platform. The flooring is marble and the rugs, wood and wicker are used as cover.

Table 5. Satisfaction Rates of Mosque Gardens

Degree of Satisfaction	Beşiktaş Sinanpaşa Mosque	Ortaköy Büyük Mecidiye Mosque	Ortaköy Küçük Mecidiye Mosque
Not Pleased	%30	-	-
Little Pleased	%20	%40	-
Medium Pleased	%15	%35	%35
Very Pleased	%35	%25	%65

Portico. Portico is a semi-enclosed space, which is supported by roofed carriers, located along the outside of a building or on the courtyard (Fig. 1). In the portico system, which is confronted with every period and geography during the history of architecture, the top covered dome, vault or sloped or flat roof cover; The supporting elements are in the form of pillars or wooden pillars (Aksoy ve diğ., 2017).



Fig. 1. Portico of Beşiktaş Sinanpaşa Mosque

Harim (Outer Courtyard). “Harim” is the area in the garden wall, which is surrounded by the walls separating the Ottoman mosques from the surrounding houses and from the street and also called “outer court” or “muhavvata”. These courtyards have been opened to various places in order to provide entrance (Aksoy, et al., 2017). In the outer courtyards of the mosques, landscape design has been made with hard landscape elements (surface materials) and soft landscape elements (plant elements) (Fig. 2).



Fig. 2. Harim of Büyük Mecidiye Mosque

Harem (Inner Courtyard). Harem is called inner courtyard. It is an inner courtyard that has ablution taps and a water fountain in the middle of the Ottoman mosques (Fig. 3).



Fig. 3. Harem of Sinanpaşa Mosque

Fountain. It is a tap that generally made of tents or abacus in the shape of a dome that is built to take ablution in the courtyard. The fountains also have open tops or closed tops built into the interior courts of the mosques. There are sometimes single rows of fountains (Fig.4).



Fig. 4. Fountain of Küçük Mecidiye Mosque

Portal. It is called the Portal that the monumental entrance, richly decorated at the main entrance of a large building. The portal is a monumental gates giving entrance and exit that decorating or adorning of usually a mosque, church, madrasah, inn, bath, etc.

Musallam Move. Musallam move is located to the right of the mosque in the Ottoman Mosques. The funeral is put on the Musallam Move. It takes place in the outer court (Fig. 5).



Fig. 5. Musallam Move of Büyük Mecidiye Mosque

Hazire (Cemetery). Hazire is called the small cemetery in the garden of the public buildings such as the mosque, madrasa, surrounded by the walls and fingers. The hazire is located on the side of the qibla wall (Fig.6).



Fig. 6. Hazire of Beşiktaş Sinanpaşa Mosque

RESULTS AND DISCUSSION

Mosques in a region are important cultural heritages which carry valuable clues about the history of regions in question and their surroundings and exhibit scenes related to social life as well as environmental conditions of the past (Yilmaza ve diğ., 2014).

The old mosque gardens must be preserved in their original form, starting from the samples of the mosque gardens examined. Functional and aesthetic principles should be put forward and landscape design principles to be observed in mosque gardens should be taken into consideration While designing new projects for new mosques. Originally suitable marble materials must be used where walkways in mosque gardens, asphalt, concrete, purified from artificial stones.

In the mosque gardens, resting areas should be built in architectural quality that will not contradict the spirit of the mosque. A children's playground can be designed for mosque gardens that are suitable for a large area. Professional teams should be selected for maintenance work of mosque gardens. Mosques are the mirror of history and cultural monuments. For this reason, the mosque gardens must be arranged taking into account the history and culture of the mosques. Soft and hard landscape elements must be well assessed and organized to make mosque gardens livable and sustainable. Urban green space plays an irreplaceable role in the improvement of environment quality, mitigation of urban heat island effects, maintenance of biodiversity and provision of entertainment venues; it is also significant for the structure and function of urban landscapes and their changes (Zukin, 1991).

Mosque gardens and surroundings are only used when they are able to communicate with the user. Mosques and gardens must be preserved and developed with the establishment of social consciousness, and in this regard, the mosques should be preferred. Mosques and gardens; which can create social environments, should be designed as pieces of history that increase imagination.

Mosques are one of the most important examples of our cultural heritage, that preserving the mosques together with the gardens and leaving them to future generations is important in terms of ensuring both social and cultural sustainability.

CONCLUSIONS

As a result of the survey, the mosque garden is not suitable for the use of user groups, incompatibility of the selected equipment with the historical structure, lack of grass areas, lack of seating areas, lighting element, water element and lack of plant elements. It is difficult to transfer the culture and lifestyle to future generations due to reasons, and it has become clear that the user is not fully satisfied. The deficiencies of mosque gardens need to be done. The most important result in the research is that the structural and herbal landscape characteristics of the mosque gardens have affected the user satisfaction. The correct and appropriate use of structural and herbal landscape elements also positively affects the level of satisfaction in the users of mosque gardens. This research as a whole enable the respondents to evaluate the importance of opened spaces at mosques and give the exposure to them of the functions of the opened spaces at mosques in attracting the people to come to the mosques.

The other attractions that could vary the functions of the opened spaces at mosques are by providing recreational facilities, recreational areas or light sports such as courts. This facilities indirectly can attract the interest of the

various generation, especially the teenagers to come to the mosques (Rasdi, 2010).

The facilities can cater for the needs of all the Muslim generation spiritually, physically and mentally (Aldrin, 2007). This is indirect can help in increasing the number of the congregation or people coming to the mosques. For this reason, the elements that were applied in the opened spaces at mosques needs to be stressed on and given proper thoughts and planning.

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