Urban Planning and Architecture Design for Sustainable Development, UPADSD 14-16 October 2015

User Evaluation of the Urban Park Design Implementation with Participatory Approach Process

Sanem Özen Turan*a, Müberra Pulatkanb, Dilek Beyazlīa, Berna Sezen Özenc

a Department of Urban and Regional Planning, Karadeniz Technical University, Trabzon, 61080, Turkey
b Department of Landscape Architecture, Karadeniz Technical University, Trabzon, 61080, Turkey
c Department of Urban and Regional Planning, Istanbul Technical University, Istanbul, 34367, Turkey

Abstract

Urban green spaces are the extensions of the natural environment, surroundings and inside of a city. Well-planned and designed open spaces particularly green spaces have a multiple positive effect on urban and urban dwellers. They contribute to the healthy development of the city, provide the city's fullness-empty balance physically, and create buffer zones between different use areas of the city. Urban parks which are the important parts of the urban ecosystem are important to improve the quality of life of a society especially where urbanization gradually increasing. Ensuring community participation in planning and designing urban parks creates an impact of increasing use of such areas. Observing how people use the park and measuring the perceptions is important in terms of how to design park to make a successful place.

This study tested that hypothesis is an exemplary study for planning and designing green areas due to be designed and implemented with a participatory process in the Rize Municipal Park, located in Rize, Turkey, in status of urban parks terms of use. In this context, during the design process interviews within the framework of “participatory design approach" is carried out with users of the city and the park. Participation is provided to process by visual materials by requesting to mark the design elements and activities that they want to be in the park. At the end of the three-year period after the implementation of the Project accessibility, changing user profiles, variety of activities, comfort and image (security and maintenance) criteria are analyzed through the surveys applied on the users. The results are presented supporting both visual materials and qualitative data.

© 2016 The Authors. Published by Elsevier Ltd. Peer-review under responsibility of IEREK, International experts for Research Enrichment and Knowledge Exchange.

Keywords: Urban Design; Urban Park; Participatory Approach; User Evaluation.

* Corresponding author. Tel.: +90-462-377-4072,
E-mail address: sanem@ktu.edu.tr
1. Introduction

Urban parks which are the important parts of the urban ecosystem are important to improve the quality of life of a society especially where urbanization gradually increasing. Urban parks have a social space characteristic that creates green system in the city. They allow urban recreation and entertainment. They balance the relationship between nature and human by moving nature to the city. They contribute to the city’s healthy development by giving peace of mind and vitality to people. Healthy, sustainable and high visual quality living spaces are created with urban green areas.

Observing the use of a park and measuring the perceptions of people about the park are important in understanding how to design for making the park a successful space. Effective park designs must be accessible, legible / perceptible, comfortable, safe and well-maintained and provide users to participate in various activities and socialize (Yücel & Yıldızçı, 2006).

2. Methodology

Ensuring community participation in planning and designing urban parks creates an impact of increasing use of such areas. In order to provide a positive contribution to urban life and adoption of design, it is important to take an active role in the design of the environment of local people for their own living.

Rapoport (2004) highlights that problems should be discovered and identified by the designer, and indicates that the design should be appealing to users, support their demands actions, etc. and eventually be culture-based.

Besides, Sanoff (2000) puts forward that the benefits of participatory studies as increasing social capital and promoting a sense of community, and argues that participatory study is an attitude related to a transforming power used in creating and operating environments for people.

Rize Municipal Park, which is located in Rize, Turkey and has the characteristics of urban park in terms of use has been redesigned with a participatory process and applied. The applied Project has the characteristics of the first implemented Project with the participatory design approach in Rize city.

This project was created by a multi-disciplinary design team (including disciplines as urban planning, architecture and landscape architecture) from Karadeniz Technical University by the request of Rize Municipality and was applied by implementing authority.

In this context, the process run with the participatory design approach (Fig. 1) will be discussed.

Fig. 1. The chart of the project process.
In the chart of the project process conducted with the participatory approach technique, the actors in the design, the internal and external inputs providing data to designers and the outputs of the process are shown. Design principles and observations made on the area are defined as internal input of designer actors. Demands of the users and implementers constitute external input to designer actors. The satisfaction in the process of project, implementation and monitoring-evaluating are output of the process.

After a brief discussion of each step of the process applied, user satisfaction which is the last step of the process will be emphasized in this paper.

2.1. 1st Step: User - Designer Relationship:

In the first stage, the physical data related to the area have been compiled with observations and design principles, which are the internal input, and a participation meeting was arranged with the users of the park. Primarily, information about urban parks with visual presentations was given to the participants. In the next stage, a discussion platform for the receipt of users’ demands and expectations was created. As a result of this, city dwellers have been included in the redesign process, and having a say of urban dwellers on an important issue in the city is provided. Also, it is aimed to ensure public participation by taking user demands/expectations through the survey.

The questionnaire related to the area is important for the determination of:
- User profile (by which part of the community used the park),
- The strengths and weaknesses of the park besides the observations
- Demands and expectations related to the park

The questionnaire form was prepared as short as possible for keeping it goal-oriented. After the first section which receives personal information as gender, age and occupation, following questions related to park were asked:
- The frequency of use of the park by the subjects,
- With whom the subjects use the park (Family, children, friends, etc.)
- Time zone of the park use,
- The security of the park,
- Unchanged properties of the park
- Liked/unliked properties of the park
- Sufficiency level of the services in the park
- Requested uses and facilities in the park in future

Answers in the form of priority ranking have been sought when open and closed-ended questions are formulated. Due to the lack of women in active use of park, men constituted 85% of the subjects. The survey was conducted in the park with a total of 139 subjects selected by random sampling method.

2.2. 2nd Step: Implementer - Designer Relationship:

In addition to user demands and internal factors such as design principles and observations made on the area, demands of the implementing authority and existing enterprises in the park have created also input to the process as external factors. The adoption of the basic principles of the design by the implementer through face to face meetings were aimed. Demands of the implementer actor are shaped by the needs of the city and the area in accordance with their own vision.

Moreover, in this process, tenant entrepreneurs next to the implementer have tried to divert the process in accordance with their financial interest and to manipulate the process with creating a pressure limiting public use by highlighting private use.

2.3. 3rd Step: Project:

In the light of both internal and external inputs, the project output was produced and submitted to the implementing authority by the design team (Fig. 2).
2.4. 4th Step: Implementation:

Rize Municipality, the implementing authority, has applied the submitted project. Municipality, the implementer of the project, is the actor that initiated the process. Municipality revealed the intention of making a successful implementation at the beginning of the process by creating a multidisciplinary project team. Responding the participatory approach trial request of designer team positively was an indicator of the innovative stance of the Municipality. However, in the process, especially entrepreneurs had a compulsive attitude about the influence of the designer team of implementer. This pressure also complicated the functioning of the process.

2.5. 5th Step: User Satisfaction:

Satisfaction is one of the most central concepts in the study of recreation behavior. Empirical studies of satisfaction in the outdoor recreation literature have been guided by two major concerns: providing feedback to recreation managers about the performance of recreation setting components (physical, social, and managerial conditions) and providing indicators of the quality of experiences and outcomes of leisure involvement (Floyd, 1997).

As a requirement of the planning and design process, in order to ensure monitoring and performance measures, it was aimed to measure the user satisfaction and in addition the success via survey after the implementation.

In this context, for examining the satisfaction from the park a second questionnaire was conducted with the users of the park by the design team after the implementation step.

The questionnaire was conducted in the park with 160 subjects selected by random sampling method. With this questionnaire, in addition to personal information of the subjects such as gender, age, education and occupation, subjects’ opinions on the following topics are examined:

- The frequency of use of the park by the subjects,
- With whom the subjects use the park (Family, children, friends, etc.),
- Time zone and the purpose of the park use,
- If the subjects used the park before implementation,
- Comparison of the criteria defined as problems in the first survey in terms of the positiveness level before and after the arrangement,
- Satisfaction level of variety of activities and sufficiency of facilities in the park,
- Liked/unliked properties of the park,
- The quality, legibility and perceptibility of the park.
3. Study Area

This study explains an implementation project experience, which started with the purchase of services from Karadeniz Technical University by Rize Municipality and involved a design and planning process that ensured public participation.

According to Rize City Development Plan, Rize Municipal Park, the study area, is located in an important position which is situated between the two busiest streets of Rize City Center called as Cumhuriyet and Atatürk Streets, close to the landmarks as the City Hall and Governor’s Office and also combines old and new city centers (Fig. 3).

Fig. 3. The status of the park in Rize City Development Plan.

After the City Hall and the Governor's Office were moved to new locations, a certain region in northwestern boundary of the park was transformed into a commercial area (Fig. 4). Rize Municipal Park, although has not the characteristics of an urban park by the size criterion, can be considered as an urban park because of being in a nodal region in terms of location and therefore serving to urban use.

Fig. 4. The location of the study area.
4. Results

The results of the survey conducted as a need of participatory design approach in the context of user-designer relationship at the design phase and the results of the survey aimed to evaluate the user satisfaction after the implementation are taken into consideration.

4.1. User profile participating in the survey:

Before the implementation, occupation groups, which were the most intense user of the park, were workers (58%), retirees (13%) and students (12%). While only 9% of trades were coming with their family, all of the unemployed were coming with their friends to the park. 85% of trades, 60% of civil servants and 53% of retirees were using the park for lunch, 80% of students and 67% of unemployed were using the park in the evening.

After the implementation, users’ 57% with friends, 21% alone and 20% with their families use the park. With the questionnaire made after the implementation it is observed that women (40%) start using the park as intense. 65% of users who come to the park with their children after the implementation prefer the lunch time.

It was determined that after the implementation, the park is used by 70% of users for the rest and by 14% of users for shopping and meeting due to the central location of the park. Users who did not come to the park before the implementation replied the reason of not coming to the park as “it was not attractive” (21%), “useless” (21%) and “insecure” (16%).

4.2. Evaluation of user satisfaction level:

The survey findings provide very important contributions in the process of identifying the problems. Results confirming the observations made by the design team have created an important input for the project. Determination of evaluating the security of the park before the implementation especially revealed the results that inappropriate user profiles should be removed from the park. Especially female users’ hesitation in using the park and the lack of park’s active use in every hour of a day reveal the problem experienced, although the park is in the city center.

Insufficiency of resting areas and park facilities (trash cans and lighting), planting problems and lack of maintenance of the park were highlighted and expectations were presented for solution by subjects.

As for expectation from park before the implementation; seating areas (75%), water element (68.7%), closed places (66.4%), reading venues (60%), playground (57.9%), sales units (55.7%), exhibition area (42.3%), sculpture (40.5%), sandpit (32.5%) and painting walls (27.5%) were wanted by the subjects. In addition to these, clock tower, fountains, toilets and security unit were among the desired use.

In expectations for the future, particularly many uses and facilities which were not existed in the park such as playground, reading venue and especially water element were observed as requested. Benefiting from the findings of questionnaire conducted due to the user-designer relationship, urban dwellers/users’ demands were evaluated appropriately and incorporated into the design as a result of design principles and observations related to the area.

It is determined that after the implementation water element is liked by 73% of users in the 12-15 age group and 42% of users in the 16-25 age group. 27% of the 31-40 age group users coming to the park with their younger age group children like the water element and 23% of them like playground. 41-50 age group users like the water element (24%), planting (%13) and seating areas (13%). It is found that 50% of age group above 70 who prefer to rest in the park like the seating areas. From here, it can be concluded that park use requirements brought by the age distribution of user profiles and criteria in user satisfaction are directly related.

It is examined that to what extent the sub-criteria related to the problems and demands defined by the users in the survey after the implementation could be met by the implementation and then inferences related to user satisfaction are made (Fig. 5).
Sub-criteria related to user satisfaction are defined as:

- A sense of security in the park
- Lighting level
- Planting
- Maintenance
- General user profile
- Suitability for the use of people with disabilities
- Satisfaction level towards the variety of activities and the sufficiency of facilities.

4.2.1. A sense of security in the park

Before the implementation 94.4% of women and 79.8% of men indicated that park had security problems and almost all the users (96%) identified the park as an insecure place. 63.5% of users states that sense of security increases in the park by the implementation.

4.2.2. Lighting level:

Before the implementation, lighting problem in the park (5.6%) emerged as one of the striking criterion after the sense of security. 79.6% of users emphasized that lighting level is much more positive than before.

4.2.3. Planting:

Planting is the only issue considered to be even well (12.2%) before the implementation. Even the most popular feature of the park before the implementation was stated as trees-natural structure by all of the women and 85% of men. Leaving the plants in the natural state had brought to the fore the lack of maintenance problem, and therefore the permeability and legibility of the park were decreased. Due to this reason, 64.1% of users, 80% of retirees and civil servants did not find planting as qualified. 70.9% of users stated that the arrangement about the planting is more positive than before. Incorporating planting as a design element into the project and doing their maintenance at certain intervals can be shown as the reason.
4.2.4. Maintenance:

Although lack of maintenance (56%) was placed on the top when examining the most negative aspect of the park before the implementation, the opinion of having a serious improvement (72.8%) after the implementation arises.

4.2.5. General user profile:

It is stated by users (73.1%) that there is a serious progress after the implementation about inappropriate user profiles in the park which was identified as the most disturbing feature (71%) before the implementation.

4.2.6. Suitability for the use of people with disabilities:

The problems related to the use of people with disabilities which are unspoken by users but emerged with observations made in the area were discussed within the project and solutions were tried to be produced. This situation is specified by users (77.7%) as one of the most significant improvements of the implementation.

4.2.7. Satisfaction level towards the variety of activities and the sufficiency of facilities:

Before the implementation, users mentioned the problems about the park such as not being a social place (12.1%) and having insufficiency of eating-drinking areas (73.8%), resting areas (72.7%), buffet (56.3%), seating areas (65.7%) and cleaning services (75.7%). Solutions were sought to overcome these deficiencies in the project. Although the project was made by considering the user requests, it did not fully stick to the project and pay enough attention to sufficiency of the facilities in the implementation phase.

After the implementation, making the satisfaction query is requested from users about the presented activity variety as seating/resting areas, eating-drinking areas, buffet/sales units, children's playground and the sufficiency of facilities as seating units, trash cans, covering elements, water elements and sculpture (Fig. 6).
As a result of this, users evaluate seating areas (45.9%) and playground (43.7%) in variety of activities as very good-good. About the sufficiency of facilities, while water element is the best assessment rate (70.5%), sculpture (69.4%) follows it.

Although there is not a clear opinion about seating units, evaluation is mainly made in the category of medium (24.5%) and poor (32.3%). The covering elements have been found insufficient and scored as poor (27.2%)-very poor (23.2%).

The reason of evaluating the covering elements and seating units as insufficient despite being satisfied with the activity of seating areas is the glitch in the implementation phase mentioned.

4.3. Users’ evaluation related to the general status of the park:

After the implementation, 71% of users evaluate the park as legible and in a supportive way with this opinion 78% of them indicate the park as perceptible.

In terms of quality, by being unstable, evaluation is mainly conducted as the category of “partially quality” (40%). 28% of users who found the park as qualified have commented as “Good for Rize, nice place' and "can meet the needs, comfortable to use it" by comparing the previous park use. 92% of users who found the park as not-qualified have expressed the small size of playground, insufficiency of seating areas and covering elements.

Water element (40.4%) has been emerged as the most popular design element, then seating area and units (11%), playground (10%), planting (8%) and cafe-buffet use (8%) follow it. 20.8% of users like the park after the implementation and indicated that there are no deficiencies and no need to change it.

Although cover elements were presented in the project in accordance with the user demands due to the climatic conditions, insufficient use of these cover element in the implementation step has led to the demand of remedy the insufficiency of the cover elements (12.3%). This glitch which occurred during the implementation step has also revealed the lack of seating units (8.4%) at the same time. The playground which did not exist in the park previously and created in accordance with user demands in the project and implementation has been praised highly by users, but users indicated that it needs to be improved (9.1%) due to intensive use.

5. Conclusion

Before the implementation it was determined that the park was not used efficiently by the people of Rize, especially women were away from the park because of the security problem and the park was identified as a urban park which was not preferred by young people and children due to the lack of variety of activities. The changing process initiated by the implementer actor starting from these problems has been continued with incorporation of the user actor into the design with “participatory design approach” adopted by the designer actor.

After the implementation, it is observed that the security problem of the park was eliminated with criteria such as planting, lighting, orientation in the design, the user profile is expanded with increased variety of activities and the sufficiency of facilities and finally the park has become used by all sections of Rize people through making the park suitable for even people with disabilities.

It is emphasized by the users that after the implementation Rize Municipal Park, that was identified by users as an unattractive, useless and insecure place before the implementation, has been turned into a comfortable, legible and convenient space with the variety of activities for public use that can meet their needs.

Some positive aspects and challenges during the process have been experienced.

The positive aspects and achievements of the project are described below:

- Process is applicable and real. The success of the process is associated with faith and commitment of the actors to the process.
- It is experienced that implementation is not the last stage of the process and absolutely monitoring stage should be taken place after the implementation. Accordingly discussion of the obtained results should be done in the user satisfaction step and by making feedback the revision of the project must be done if it is needed. It is learned that the duty of designer team is not ended just with the preparation and implementation
of the project. It is experienced that designer team also has a duty to orient the process as an important actor of monitoring step. Although implementer has not requested this, designer actor must have a pressure or guiding role on the implementer by organizing this monitoring process.

There have been some challenges in the process especially in terms of the implementer - designer relationship. These challenges are described below:

- Entrepreneurial pressure on the implementer is reduced by the establishment of the relationship of entrepreneur and designer.
- Due to the period of the project coincided with local elections, implementer has been fast and hasty and has not implemented some important details in the project.

There are negative reflections of problems arising in the implementation phase because of implementer actor not fully stick to the original project proposed by the designer in accordance with the internal and external inputs, on user satisfaction. At this point, the vision of implementer actor and the strong, healthy and efficient relationship of designer - implementer actor gain importance.

User satisfaction includes monitoring and evaluation which comprises analyzing of both adopted participatory design process and implementation. It is experienced that especially the participatory design process affect user satisfaction in a positive way and the design is adopted by the users. It can be concluded that the participatory design process plays a key role in ensuring user satisfaction.

References


