

Adding Value to Parks Through Understanding User Needs

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ABOVE Tree-top Walk in Central Catchment Nature Reserve (Photo: National Parks Board, Singapore).
OPPOSITE, TOP LEFT & RIGHT West Coast Park (Photos: National Parks Board, Singapore).
OPPOSITE, BOTTOM Jacob Ballas Children's Garden in Singapore Botanic Gardens (Photo: National Parks Board, Singapore).

For city dwellers who live in countries endowed with scenic countrysides and landscapes, some travelling would get them away from the urban surroundings. In Singapore, visiting parks is perhaps the most practical way of staying close to nature. The presence of parks contributes to the quality of life in different ways. Besides the environmental and ecological benefits, parks bring notable social and psychological benefits to city dwellers, and are increasingly recognised as an important component of a liveable urban environment.

While such benefits can be generalised, a park is seldom the same to two different park users. In fact, a park is almost never designed to cater to a single group of users, but rather, planned to cater to a diverse group of park users within its population catchment. Sometimes, park design is also influenced by its inherent environmental, social or heritage features. However, it is rare for post-design and post-construction studies to be conducted to evaluate if the original design intents of parks have been met through park usage and user perception studies, largely because landscape architects are seldom involved in the post-construction management of parks.

Yet, such studies are crucial to inform future park designs. For older parks, park usage and user studies are also needed to inform various aspects of parks management, such as the deployment of maintenance crews and management staffs, re-allocation of resources, adequacy of basic facilities, etc.

In this article, we describe the typical considerations in conducting park usage and user studies. Indeed, we suggest that in line with the management adage that “you cannot manage what you



do not measure,” effective park management can only take place if the needs and wants of the customers are understood.

Factors Affecting Usage of Parks

What drives visitors to parks? This is a seemingly simple question, but one with complex answers. In fact, Bryne and Wolch (2009) introduced “a conceptual model that incorporates the insights of leisure scholars with those of geographers”, aimed to explain the usage of parks as a function of (1) socio-demographic characteristics of park users and non-users, (2) political-ecology and amenities of the park, (3) historical and cultural landscapes of park provision, and (4) individual perceptions of park spaces. Broadly speaking, this relates to both tangible aspects of a park, such as the accessibility, cleanliness, vegetation and types of facilities, to less tangible aspects, such as the sense of welcome, safety and level of management, as well as broader cultural and socio-demographic issues, such as socio-economic status, attitudes to nature and leisure lifestyle preferences. Indeed, there is still scant information, especially context-specific information, in published literature that examines park usage patterns as influenced by such factors.

An Active Approach in Understanding Park Users' Needs

Mark Francis (2003) wrote in *Urban Open Space: Designing for User Need* that addressing user needs has been identified as a basic requirement in creating and maintaining successful open spaces. As the agency overseeing the provision and management of parks in Singapore, the National Parks Board (NParks) takes an active approach in seeking the opinion of its people to understand their needs and aspirations for parks. This allows residents to

have a direct input in the planning, design and management of their parks. From the results, modifications are made to benefit a diverse group of potential users.

NParks carries out surveys of park users on a regular basis to enable park managers to understand user needs and manage their parks more effectively. A user survey, when done correctly on a representative sample population, provides objective information as the users see it. This information would help to validate assessments done separately by park managers, which may be subjective. Surveys could also provide a wealth of information on the types of users and also users' responses to any changes made in the park.

This information can help park managers ascertain the demographic composition of users of a particular park. A comparison of this user information with data on the residents staying within the community around the park would help to identify any possible group being missed. Such analysis could reveal any misalignment of amenities with the characteristics of the residents staying within the community. Information on the usage of facilities from the survey reveals facilities that are over-used or under-used. This will help park managers make decisions on replacement strategies, like the early replacement of over-used facilities or delayed replacement of under-used facilities. Such information helps managers in prioritising the maintenance schedule of assets.

Surveys could also help managers understand why residents do not use a certain park or certain facilities. The surveys could also include questions to find out which facilities are being valued by users. This information can help park





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managers safeguard installations in the park or even to secure funding for enhancement.

Approaches in Carrying Out Park Studies

There are three main approaches of carrying out park studies. The method selected is dependent on the target respondents and the objectives.

The first approach, "observation study," is used to capture moments of truth where the observer notes down certain behaviours of the users in their course of park usage. This is best followed by an in-depth interview, during which users will be asked to explain their earlier behaviour.

The second approach, "focus group discussion," is most appropriate for establishing in-depth information, like seeking attitudes and views for certain user group. This involves the engagement of an experienced facilitator, who will initiate a series of issues for group discussion. Typically, the session is recorded and the transcript is used for further analysis of issues.

The third approach, "quantitative survey," involves interviewing a significant number of users, to collect representative data. Quantitative surveys can in turn be household surveys and on-site surveys. Interviewers are guided by a pre-determined questionnaire, which may consist of either close-ended or open-ended questions. These surveys can be designed to provide a range of the information, like types of users, activities that users engage in, preferences of users, usage patterns and satisfaction levels. If the respondents are selected from a representative sample of the population, quantitative surveys can give park managers a good sense of the general view of the whole population.

Estimating Number of Park Visitors

While surveys provide qualitative information, having information on the number of visitors is also important to parks managers. However, counting the people visiting parks can be difficult, given the openness of parks. In a typical park, people come freely into a park, through numerous entrances, to engage in a wide range of activities spreading over various topologies across a large area. In addition to this, park visitors counting does not seem to be an entrenched management practice, as pointed out by Harnik (2005) in his article "If You Don't Count, Your Park Won't Count." In the same article, Harnik also mentioned that most park managers feel that managing parks are not profitting businesses, so counting is an expense and a headache that they don't need.

In fact, Alan Tate (2001) stated that visitor counts can be a form of profit and loss accounting in park management in his book *Great City Parks*. These counts can be collected through park visitor estimation studies. To have reliable data for visitor estimation, the counting must be conducted systematically at predetermined locations, where a high traffic of visitors will pass through, and at different times of the day and different days of the week. However, such estimation studies are time and labour intensive and hence costly to conduct. Manual counting by deploying workers to count visitors and multi-stage sampling often come with high margins of error and it is difficult to use the results for periodic analysis.

Automated counting through equipment is considered to be the most practical method, which allows a non-disrupted operation in the outdoor environment. This can be carried out by installing an automated round-the-clock counting system for parks. The system should ideally be able to do continuous bi-directional counting, and transmit the data wirelessly to a central database. This would reduce the cost and inconvenience in data collection. The system should also allow park managers to carry out centralised data and system management, analysis and visualisation and reports on their individual parks.

OPPOSITE, CLOCKWISE FROM TOP LEFT

Changi Beach Park (Photo: National Parks Board, Singapore); Woodlands Waterfront Park (Photo: The J Babies blog - www.jbabiesinthedaisies.com); Changi Beach Park (Photo: National Parks Board, Singapore); Singapore Botanic Gardens (Photo: National Parks Board, Singapore).

The counts in these machines do not register the number of unique visitors. Rather, they are traffic counts, registering the number of people passing through them. They are not able to count uninterrupted traffic. These counters are also likely to be blocked by people standing in an entrance. The other problem with these counters is that it cannot discern people walking side-by-side. Thus, it does not count groups of users passing through a counter at the same time. However, this can be overcome by adjusting these counts with a factor established through a calibration study.

Conclusion

In conclusion, visitor estimation can provide useful information to help managers assess visitor impacts to the park and gauge the quality of the visitor experience with respect to over-crowding. On the other hand, park surveys are useful tools for the collection of information that can help parks to be planned, designed, developed and managed effectively. Although park managers might have gathered inputs from other informal channels or made certain assessments, park surveys tend to give more objective opinions as the users see it and help to validate their assessments.

To maximise the outputs from a park survey, managers should plan it with clear objectives. The survey should also be planned well ahead of time, as the information needs to be collected over time to prevent bias. Sampling of respondents must be done properly to ensure representativeness of the population group that is of interest. Surveys must also be done at an appropriate interval to capture relevant changes that should not be missed. A well planned, clearly defined survey done on a representative sample of population will help us understand the needs of users and non-users better. 

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According to the findings of the latest Parks Usage and Satisfaction survey by NParks for the year 2009, East Coast Park and Pasir Ris Park — coastal parks with long beaches — are the most popular in Singapore.

The top 10 most popular parks were:

1. East Coast Park
2. Pasir Ris Park
3. West Coast Park
4. Bishan Park
5. Changi Beach Park
6. Singapore Botanic Gardens
7. Bukit Batok Nature Park
8. MacRitchie Reservoir
9. Bedok Reservoir Park
10. Punggol Park

Complementing the Parks Usage and Satisfaction Survey is the Leisure Lifestyle Survey, which reveals that parks are important for the leisure activities for a large number of Singaporeans — close to half the population. However, alternative forms of recreation, notably those made possible by the internet revolution, like watching videos online, continue to be a key competitor to the offerings in parks.

These periodic surveys allow NParks to monitor the park usage trends and shifting user preferences. They are important in helping managers keep the parks relevant for the recreational needs of residents in our city-state. For example, wireless internet hotspots have been provided in some parks (e.g., Admiralty Park) to allow user to engage in online activities for which parks have not been a traditional venue. Indeed, an area which NParks is currently exploring is the use of the mobile internet (through the 3G cellphone network) to enhance the park users experience.

