

Analyzing the Sablettes Promenade's User Satisfaction in Algiers to Improve the Quality of Coastal Promenades in Algeria

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Abstract

One of the most interesting achievements of Algiers Bay nowadays is the Sablettes Promenade, which was developed according to a strategic plan for 2031-2035. It has a lot of features and amenities that have drawn a wide range of people, but there are many negative factors influencing the experience of its users. The aim of this study was to explore users' perceptions by analyzing their satisfaction using a post-occupancy evaluation survey, executed with a sample of 271 users, and the results were processed with SPSS Statistics version 26. The results clearly showed the level of users' satisfaction with the following criteria: economy of use, management, attractiveness, safety and security, mobility, accessibility, urban ambience, urban composition, arrangements, and environmental quality, while detecting factors that could improve user satisfaction in each criterion. This enabled us to extract characteristics for the design and development of future urban coastal promenades in Algeria.

Keywords: Users' Satisfaction; Quality; Urban Waterfront; Coastal Promenade.

1. Introduction

At present, urban coastal promenades have become one of the most specific public spaces, due to their attractive location. In addition Coastal cities around the world are adopting urban regeneration initiatives to make this walking experience more interesting and preserve the relationship between the city and its waterfront after years of separation by industrial activities. The waterfront's revitalization efforts started in the 1970s, accelerated in the 1980s, and is going to continue far into the future (Sembel, 2012). Baltimore, with the development of its Inner Harbour, and Boston are among the first cities in the USA to implement waterfront projects, and public promenade spaces and recreational areas have been given major importance in these projects (Erkök, 2009). Urban coastal promenades share common characteristics: their direct relationship with the beach creates a linear social space that attracts people to move along its length and enjoy the sea view, as well as being designed for pedestrians and cyclists only and the absence of car traffic. otherwise they have lot of differences; some are lined with entertainment venues amusement parks, while others are lined with apartment buildings, houses, beach cottages, motels, hotels, resorts or retail outlets, or a myriad of combinations of these (Macdonald, 2018). This public space, designed for relaxation and prepared to accommodate different categories of users, must be well-designed and conform to quality criteria to ensure a good walking experience for users. Quality is a complex concept (Bailly & Marchand, 2019; Amen, 2021; Amen et al., 2023; Jacob, 2023; Moretti, 2023) that has been evaluated by many researchers in several fields using different methods, including those based on subjective assessment, focusing on users' perceptions, satisfaction and well-being, where the researchers applied the Post Occupancy Evaluation method, generally include qualitative and quantitative approaches such as surveys, interviews, direct observations, and focus groups. Surveys and questionnaires are commonly used due to their ability to gather a large amount of data from diverse users. These instruments often utilize Likert scales to measure satisfaction across various criteria, including accessibility, safety, amenities, and environmental quality like the study of (Tourinho et al., 2021).

In Algeria, the city of Algiers has neglected the beachfront for many years. Therefore, it has attempted to reestablish this situation through the 2035 strategic plan, with the Sablettes promenade serving as one of its primary accomplishments. However the promenade still has a lot of issues and challenges: Its area is still confined by nearby infrastructure (freeway no. 11 and the railroad line), even if the efforts have been made to reconnect it with the city by building a large pedestrian footbridge, but the structure itself is situated in a parking lot currently accessible to cars, causing a difficult access for the non-motorized population. The project's lack of overall management for various political reasons further undermines the development's consistency, then the problematic of this research revolves around the following question: What are the main variables affecting users satisfaction at the Sablettes Promenade, and how can these findings be applied to raise the standard of coastal promenades across Algeria? The main goal of this research is to improve the quality of this urban coastal promenade by evaluating user satisfaction according to the three dimensions of sustainable development, helping authorities to improve coastal public spaces, by identifying their strengths and failings and becoming aware of the aspects that make them more effective from a sustainability perspective. The methodology employed in this study involves the use of a post-occupancy evaluation survey, meticulously designed to capture a broad range of user experiences and perceptions. The survey data was collected from 271 users of the promenade and subsequently analyzed using SPSS Statistics version 26. This approach allowed for a detailed examination of user satisfaction across multiple criteria, highlighting areas for potential improvement. This research is expected to make significant contributions in several ways:

It provides empirical evidence on user satisfaction specific to the Sablettes Promenade, offering insights that can be generalized to other coastal promenades in Algeria. The study's findings will guide urban planners and local authorities in refining and enhancing the quality of existing and future coastal promenades, ensuring they meet the diverse needs of their users. The research contributes to the broader discourse on urban public space management, emphasizing the importance of user feedback in shaping sustainable and inclusive urban environments. This document is organized into four parts. The first chapter includes a review of the case study. The second section presents the analysis approach based on the main aspects determining user satisfaction. The third chapter discusses the survey results and their analysis. The conclusion and recommendations are covered in the fourth chapter, which also offers ideas for improving the quality of Algeria's coastal promenades.

2. Case Study Presentation

The development of the Algiers Bay includes structural projects linked with a wide promenade extending fifty kilometers. Three sections have been completed : section one the Bab el-Oued promenade in the West measuring 220-metre, section 2 the Bordj el-Kiffan promenade in the East measuring 950-metre and section 3 the sablettes promenade in the center of the Algiers Bay measuring 4.5 km, which was developed after years of neglect.



Figure 1. Situation of the Sablettes Promenade within the Bay of Algiers communes (Authors, 2022)

The Sablettes promenade covers a large area of 80 Ha, hence it needs a variety of facilities for its diverse urban uses. It contains: the pedestrian boardwalk with 4.5 Km, the cycle path with 3.5 Km, artificial beaches, jetties, picnic areas and playgrounds for relaxation, strolling and enjoyment. The presence of sports facilities such as sports fields (soccer, basketball, weight training) to ensure the physical health of users. Cultural facilities such as the water museum and open-air theater to host various events.

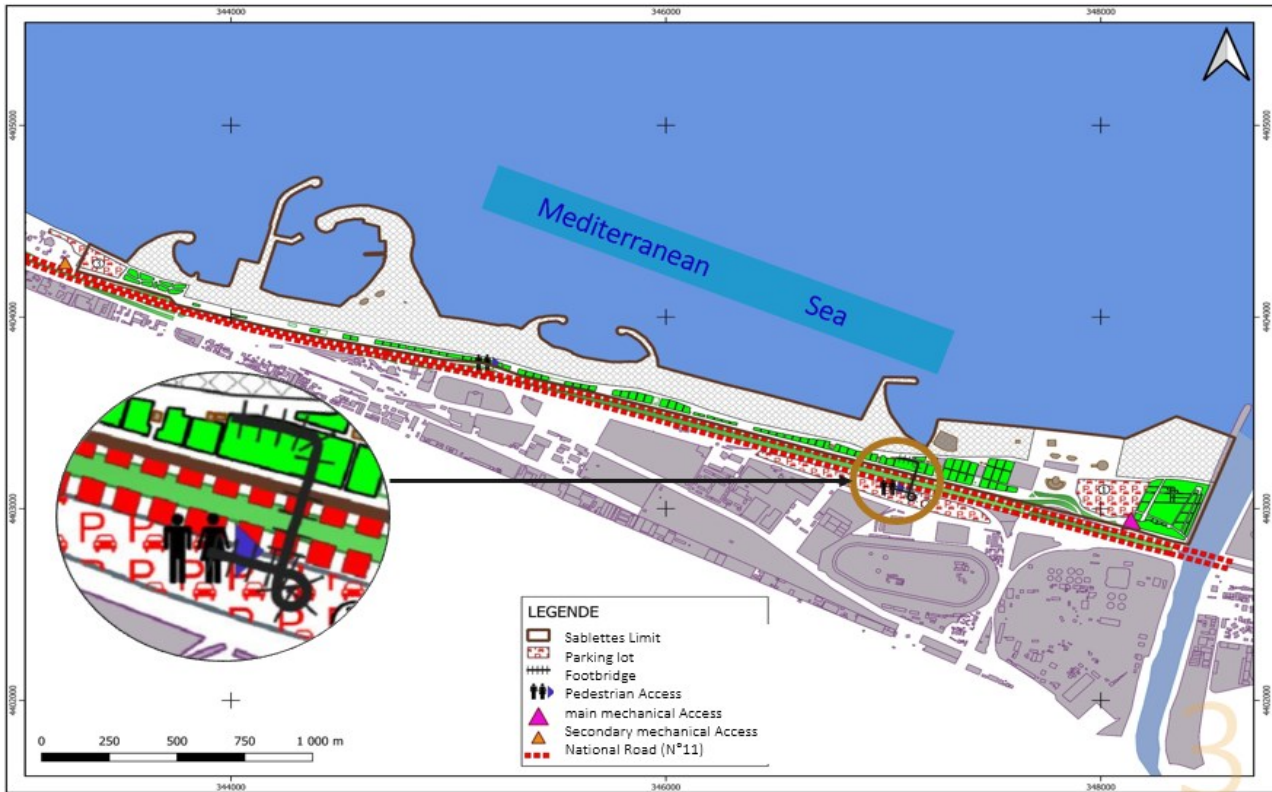


Figure 2. The connection between the Sablettes promenade and the surrounding infrastructure (Authors, 2023)

3. Material and Methods

The purpose of this study was to analyze the satisfaction level of users in the Sablettes promenade to identify the significant factors that will increase the perceived quality of the promenade.

the methodology of this research was mainly based on the post-occupancy evaluation method, which consists of measuring the degree of user satisfaction using a self-administered questionnaire (online and in the field), which is composed of three sections. The variables were created using the QUEP (Quality of Public Spaces) method's criteria (Hadji, 2014).

3.1. Questionnaire composition and measurement of variables

- The first section: designed to collect Demographic Data (gender, age, level of education, profession, place of residence, etc.). The questions used in this section are single and multiple-choice.
- the second section designed to measure user satisfaction quality of the sablettes promenade using scaled questions of likert with 5 points, the important components that affect quality were composed of 10 measures: Economy of use, Management, Attractiveness, Safety and security, mobility, Accessibility, urban ambiances, urban composition, arrangements, environmental quality.
- The last section included question about the most annoyances for users in the promenade

Table1. Contents of the questionnaire.

Category	Contents	Classification of variables
Demographic Data	gender, age, level of education, profession, place of residence, frequency of use, activities, transport used.	Categorical variable
Economy of use	1) convenience of commercial service costs, 2) Employment opportunities, 3) useful frequency throughout the year.	Continuous variable (Likert scale)
Management	1)facility management, 2) sufficiency of waste areas 3) cleanliness of the promenade, 4) green area management.	
Attractiveness	1) sufficient services, 2) sufficient and management of recreation area (sport, play, rest),3) convinience events, 4) diponobility of information and communication technologies.	
Safety and security	1)the openness of the promenade, 2) diversity of users, 3) appropriate lighting at nightn 4) security and supervision of the promenade.	
Mobility	1) confortable pedestrian walk, 2) convenience of using bicycles, 3) sufficiently wide of the promenade, 4) convenient movement for persons with disabilities.	
Accessibility	1)facility of access, 2) disponibility of public transport (Bus, Tramway, Metro, Taxi) close to the promenade, 3) convenience of entering and exiting, 4) sufficient of parking-lot.	
Urban ambiances	1) the enjoyment of the promenade's surroundings, 2) ability of hearing and be heard, 3) satisfaction of smells.	
Urban composition	1)organization of Spaces reserved for (sports, leisure, children's games, families, services and parties), 2) homogeneity of the various facilities, such as kiosks, skips).	
Arrangements	1) sufficient of seating areas, 2) information signage.	
Environemental quality	1) available of sun protection systems, 2) available of wind protection systems, 3) available of rain protection systems	
Annoyances	the most disturbing factor	Categorical variable

3.2. The sample size of the survey

To find the sample size, it was necessary to determine the intensity of use, as follow: 40 000 users on weekdays, and 90000 users over the weekend so the average intensity of use is 54000 users, then we obtained a representative sample of 271 users calculated with the equation of (Steven K. Thompson) using the formula below:

Table 2. The sample size.

Intensity of use (days of the week)	Intensity of use (weekends)	Average intensity of use	Representative sample
40 000 users	90 000 users	54 000 users	271

$$n = \frac{N \times P(1 - P)}{\left[(N - 1) \left(\frac{d^2}{z^2} \right) \right] + P(1 - P)}$$

n: sample size

N: population size (N=54 000)

p: probable value (p=0.50=

d: margin of error (d=5%)

z: value depends on desired confidence level (z=1.65)

4. Results

4.1. Demographic Characteristics of Survey Respondents

The initial section of the results provide an overview of the demographic characteristics of the survey respondents, revealing diverse usage patterns and preferences among different user groups. As illustrated in (Figure 3), the Sablettes Promenade attracts a balanced mix of male and female visitors, indicating its broad appeal across genders. For age the promenade is frequented mainly by the young category, In terms of educational background, a striking 83.4% of the respondents are university graduates. Geographically, the data reveals that 62.4% of the users are residents of Algiers, this local dominance underscores the promenade’s role as a key urban space for the city’s inhabitants, while also hinting at its potential to draw visitors from other regions. Examining the frequency of visits, it becomes clear that the promenade is predominantly frequented on an occasional basis, demonstrating its role as a leisurely destination rather than a daily routine spot, with users mainly engaging in activities like strolling, which emerged as the most common occupation. The mode of transport data indicates that cars are the primary means of reaching the promenade. Lastly, when identifying factors that disturb the promenade experience, noise from other people stands out as the most significant annoyance for users.

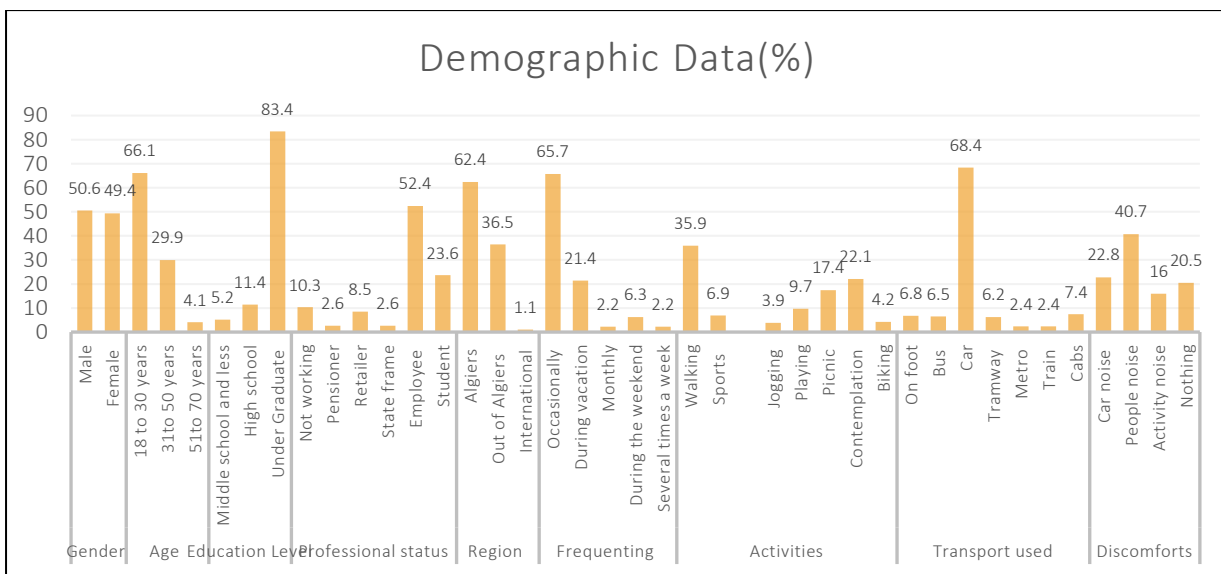


Figure 3. Demographic Data of the Sample Study (N=271)

4.2. User Satisfaction Analysis

The graph (Figure 4) illustrates the level of user satisfaction across ten key criteria, evaluated on a 5-point Likert scale. The satisfaction levels are categorized as follows:

- Low Level: (1- 2.59)
- Medium Level : (2.60- 3.39)
- High Level : (3.45-5)

According to the data, the environmental quality and attractiveness criteria have averages of 2.04 and 2.32, respectively, placing them in the low level interval. this indicates that the users are not satisfied with these two requirements. However, the following averages were obtained for the variables related to economy of use, management, mobility, accessibility, urban ambience, urban composition and arrangements: 2. 78, 2.82, 3.24, 2.91, 3.06, 2.71, 2.63 respectively, The medium ranking for this result reflects that users are moderately satisfied with most of the criteria. although, the safety and security criterion had an average score of 3.45, placing it in the high level, indicating that people find this criterion satisfying.

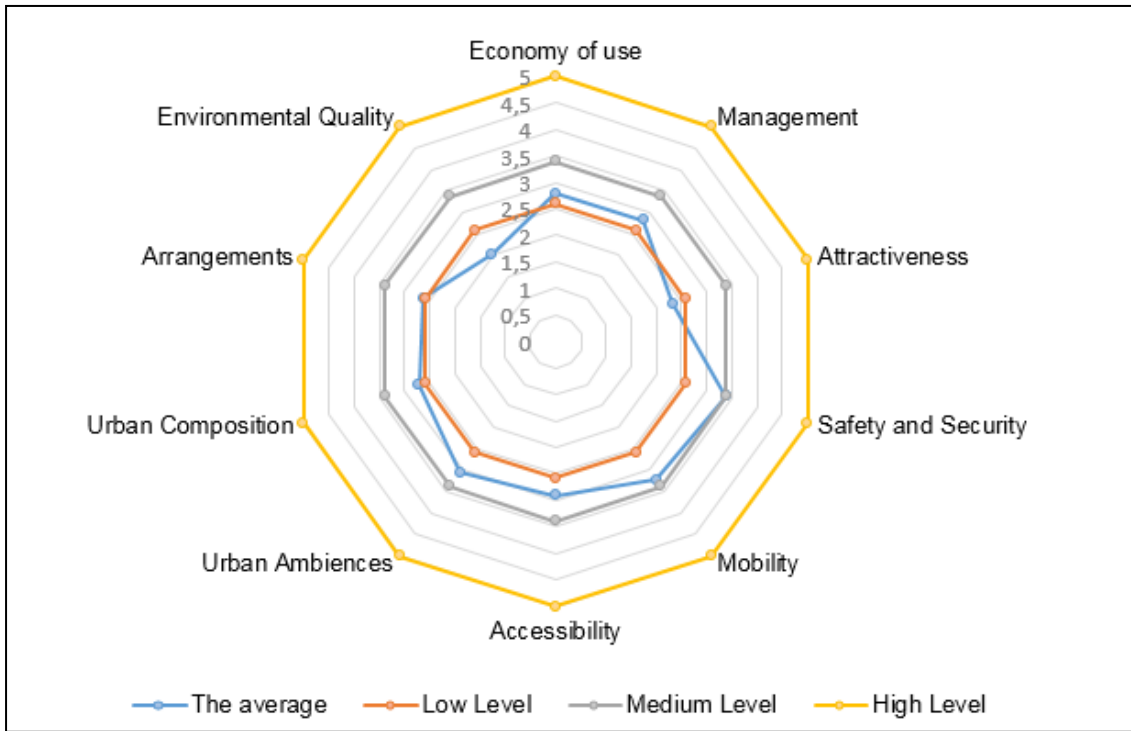


Figure 4. Satisfaction levels for the ten criteria

4. Discussions

The analysis reveals that users are generally dissatisfied with the promenade's attractiveness and environmental quality. Significant factors contributing to this dissatisfaction include:

- **Lack of Information and Communication Technologies (ICT):** Users noted the absence of digital information kiosks and free Wi-Fi, which could enhance their experience.
- **Insufficient Recreation Areas:** There is a noticeable shortage of designated areas for leisure activities, limiting options for recreation.
- **Missing Services:** Essential services such as cafes, restrooms, and shaded seating areas are either insufficient or absent.
- **Inadequate Weather Protection:** The promenade lacks sufficient shelters against wind, rain, and sun, making visits uncomfortable during adverse weather conditions.

Users expressed moderate satisfaction with several criteria, including economy of use, management, mobility, accessibility, urban ambience, urban composition and arrangements. The following factors were identified as areas needing improvement:

- **Waste Management:** There is inadequate space allocated for waste disposal, leading to cleanliness issues.
- **Cleanliness:** Overall, the promenade's cleanliness is insufficient, affecting the user experience.
- **Accessibility for Disabled Persons:** Circulation areas for individuals with physical disabilities are insufficient, making it challenging for them to navigate the space.
- **Access from Nearby Residences:** Access points from surrounding residential areas are difficult to use, deterring potential visitors.
- **Public Transport Facilities:** The lack of adequate public transport options makes it harder for people to reach the promenade, particularly for those without personal vehicles.

Among the evaluated criteria, safety and security received the highest satisfaction levels. Users feel secure and well-protected while visiting the promenade, indicating effective measures have been implemented in this area. The presence of security personnel, surveillance cameras, and well-lit pathways contribute to this positive perception.

5. Conclusions

This study investigated the satisfaction levels and perceptions of the Sablettes promenade users in Algiers' Bay. By using a POE method which was based on a questionnaire included the dimensions of sustainable development, and it was composed of 10 measures with their numerous factors to assess the quality of urban coastal promenades from a subjective perspective.

The analysis highlights that while users appreciate the safety and security of the Sablettes Promenade, there are significant areas for improvement that the Sablettes promenade and other urban coastal spaces must have to improve future user satisfaction, such as:

- The design arrangement should be changed depending on the season, In order to better satisfy the needs of users and reduce the use of non-renewable materials.
- Improve the scope of maintenance interventions by adding the preservation for boardwalk tables, benches, and paving.
- Improving the accessibility of the promenade to the surrounding neighbourhoods.
- the development of occultation specifically designed for coastal promenades, which can be opened or closed according to safety standards.
- Making the positioning of the various amenities consistent by dividng the promenade into sectors, and people can enjoy their activities without disturbing one another.

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Conflict of Interests

The Author(s) declare(s) that there is no conflict of interest.

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