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Landscape Quality and User Satisfaction Evaluation: A Post-Occupancy Study of Selected Urban Parks in Lagos State

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Abstract
Urban parks are essential elements of contemporary urban environments because they provide ecological, social, and recreational benefits to city residents. In highly urbanized metropolitan areas, access to well-designed green spaces improves public health, promotes social interaction, and enhances environmental sustainability. However, the success of these spaces depends on how effectively they respond to the needs and expectations of users after construction and occupation. This paper evaluates landscape quality and user satisfaction through a post-occupancy evaluation of two prominent urban parks in Lagos State, Nigeria: Johnson Jakande Tinubu (JJT) Park and Dr. Oluyomi Abayomi Finnih Recreational Park. The research examines landscape performance indicators including accessibility, environmental comfort, safety, maintenance, aesthetics, and the availability of recreational facilities. A mixed-method approach involving site observation, questionnaire surveys, and photographic documentation was employed to obtain both qualitative and quantitative data regarding park usage and user perception (N=150). The study identifies how landscape elements influence behavioral patterns, frequency of use, and overall visitor satisfaction. Findings indicate that landscape quality significantly correlates with user satisfaction ($r=0.74$, $p<0.01$), with maintenance and safety emerging as the strongest predictors. JJT Park consistently outperformed Finnih Park across most indicators, particularly in aesthetics (mean difference=0.9, $p<0.05$) and cleanliness (mean difference=1.1, $p<0.01$). The research contributes to landscape architecture practice by providing recommendations that can improve the design, planning, and management of urban parks in Lagos. Ultimately, the research emphasizes the importance of post-occupancy evaluation as a tool for improving the performance and sustainability of public open spaces.

Keywords: Landscape Quality, User Satisfaction, Post-Occupancy Evaluation, Urban Parks, Public Space, Lagos

1. Introduction

Urban parks have long been recognized as vital components of the urban landscape. They serve as spaces for recreation, relaxation, environmental conservation, and social interaction. In rapidly expanding cities such as Lagos, where the population exceeds 15 million and annual growth rates approach 3–4%, public parks provide essential relief from dense urban development by offering accessible green environments for residents and visitors (Lawanson, 2024) [6]. However, recent scholarship warns that many architectural and open spaces in Lagos inadvertently amplify psychological stress through poor ventilation, sensory deprivation, and lack of restorative features (Babamboni *et al*., 2025) [2]

Landscape architecture plays a crucial role in shaping the quality and usability of these parks. The arrangement of pathways, vegetation, seating areas, water features, lighting, and recreational facilities influences how users interact with the space. A well-designed landscape encourages social engagement, promotes physical activity, and improves the overall visitor experience (Gehl, 2011) [4].

However, the effectiveness of park design cannot be fully understood without evaluating how these spaces perform after they have been constructed and used by the public. Post-Occupancy Evaluation (POE) provides a systematic method for assessing whether the design of a space successfully meets user needs (Preiser & Vischer, 2005) [9]. Through POE, designers and planners can identify strengths, weaknesses, and opportunities for improvement.

This research focuses on two well-known parks located in Ikeja, Lagos, Nigeria. Johnson Jakande Tinubu (JJT) Park is widely recognized for its landscaped gardens and central water feature, while Dr. Oluyomi Abayomi Finnih Recreational Park provides recreational amenities and open green spaces for public use. Evaluating these parks provides valuable insights into how landscape design influences user satisfaction and urban park performance.

1.1. Aim and Objectives

1.1.1. Aim

The aim of this study is to evaluate landscape quality and user satisfaction through post-occupancy evaluation of selected urban parks in Lagos.

1.1.2. Objectives

The specific objectives of this study are to:

1. To identify the existing landscape elements within the selected parks.
2. assess the environmental quality of the parks including accessibility, safety, and maintenance.
3. analyze patterns of park usage and user behavior.
4. evaluate users' satisfaction with landscape design and park facilities.
5. propose recommendations for improving the performance of urban parks in Lagos.

1.2. Research Questions

1. What landscape elements are present in the selected parks?
2. How do users interact with the park environment?
3. What environmental factors influence user satisfaction within the parks?
4. How effectively do landscape features support recreational activities?
5. What improvements can enhance user experience in these parks?

2. Literature Review

2.1. Concept of Landscape Quality in Urban Parks

Landscape quality refers to the overall physical, aesthetic, ecological, and functional characteristics of a space as perceived by users. It encompasses elements such as vegetation, spatial organization, accessibility, safety, maintenance, and the availability of amenities (Kaplan & Kaplan, 1989) [5].

Studies emphasize that high-quality landscapes are those that integrate natural elements—greenery and water features—with built features in a harmonious manner. Visual quality, biodiversity, and environmental comfort are consistently identified as key indicators of landscape quality (Marcus & Francis, 1998) [8]. Research shows that greenery richness and aesthetic appeal significantly enhance user satisfaction in parks, while poor lighting or lack of vegetation reduces perceived quality.

Additionally, landscape quality is increasingly assessed through multidimensional frameworks, incorporating environmental, social, and cultural dimensions. Accessibility, safety, and comfort are considered foundational attributes, while aesthetics and activity provision enhance user engagement (Carr *et al*., 1992) [3].

2.2. User Satisfaction in Urban Parks

User satisfaction refers to the degree to which park users' expectations are met or exceeded by their experiences. It is a subjective measure influenced by both environmental characteristics and individual user factors such as age, gender, and usage patterns (Whyte, 1980) [11].

Empirical studies indicate that satisfaction in urban parks is strongly linked to:

- Availability and quality of recreational facilities
- Cleanliness and maintenance
- Safety and security
- Accessibility and proximity
- Presence of natural features

Research also highlights that dissatisfaction often arises from inadequate infrastructure, poor maintenance, and lack of amenities. Users tend to report higher satisfaction in parks with diverse activities and fewer incidents of vandalism (Marcus & Francis, 1998) [8].

Furthermore, user satisfaction is influenced not only by physical attributes but also by psychological perception and environmental experience, including soundscape, visual quality, and social interaction opportunities. Studies on institutional environments have shown that physical environmental quality directly influences user well-being and satisfaction (Ademakinwa *et al*., 2024) [1]. In parallel, emerging research in Lagos demonstrates that architectural stressors—such as excessive noise, poor daylight access, and absence of greenery—directly correlate with elevated anxiety and reduced emotional well-being among urban adults (Babamboni *et al*., 2025) [2].

2.3. Theoretical Framework

This study is grounded in two complementary theoretical perspectives. First, Kaplan and Kaplan's (1989) [5] Attention Restoration Theory (ART) posits that well-designed natural environments restore cognitive function and reduce mental fatigue. Second, Lynch's (1960) [7] theory of imageability emphasizes that legible, well-organized spaces enhance user comfort, wayfinding, and overall satisfaction. Together, these frameworks provide a lens for understanding how landscape quality translates into user satisfaction.

2.4. Relationship Between Landscape Quality and User Satisfaction

The relationship between landscape quality and user satisfaction is well established in the literature. High landscape quality generally leads to higher satisfaction levels, increased park usage, and improved well-being (Kaplan & Kaplan, 1989) [5].

However, recent studies suggest that this relationship is complex and multidimensional. Both environmental features (greenery, amenities) and spatial patterns (layout, size, connectivity) influence satisfaction. While environmental features have traditionally received more attention, emerging research argues for integrating spatial configuration into evaluation frameworks (Lynch, 1960) [7].

Moreover, importance-performance analysis is widely used to understand how users rate different landscape attributes in terms of importance and satisfaction. This approach helps identify priority areas for improvement by comparing expected and perceived quality.

2.5. Post-Occupancy Evaluation as an Assessment Tool

Post-Occupancy Evaluation is a systematic process used to assess the performance of built environments after they have been occupied. It focuses on user feedback to identify strengths, weaknesses, and areas for improvement (Preiser & Vischer, 2005) [9].

POE in urban parks typically involves:

- Questionnaire surveys (using Likert scales)
- Field observations
- Interviews and user behavior mapping

Studies demonstrate that POE is effective in identifying key determinants of user satisfaction and informing design improvements. POE frameworks often evaluate both expected quality (importance) and perceived quality (satisfaction) to generate comprehensive assessment indices.

2.6. Empirical Studies on Urban Park Evaluation

Several empirical studies across different regions provide insights into landscape quality and user satisfaction:

- In Malaysia, research found that evaluating physical attributes of parks is essential for improving mental well-being and ensuring usersatisfaction
- In Saudi Arabia, users reported high satisfaction with visual quality and maintenance, but lower satisfaction with facilities and lighting conditions.
- In India, studies highlight that parks must cater to diverse social and cultural needs to enhance satisfaction and usability.
- These studies collectively show that context-specific factors, including cultural preferences and socio-economic conditions, play a significant role in shaping user perceptions.

2.7. Research Gap in the Nigerian Context

Despite the growing body of literature globally, there is limited research focusing on post-occupancy evaluation of urban parks in Lagos, Nigeria. Existing studies in developing countries often highlight challenges such as:

- Inadequate maintenance
- Poor infrastructure
- Safety concerns
- Unequal distribution of green spaces

Given Lagos' rapid urbanization and population growth, there is a critical need for empirical studies that evaluate the performance of its urban parks from users' perspectives. Such studies provide evidence-based recommendations for improving park design, management, and policy.

3. Methodology

3.1. Research Design

The study adopted a mixed-method research approach combining qualitative and quantitative data collection techniques. This approach allowed the researchers to evaluate both the physical characteristics of the landscape environment and the perceptions of park users.

3.2. Study Area

The research focused on two parks located in Ikeja, Lagos State:

- Johnson Jakande Tinubu (JJT) Park - A Landscaped park featuring gardens, water features, and walking paths
- Dr. Oluyomi Abayomi Finnih Recreational Park – A recreational park providing sports facilities and open green spaces

These parks were selected because they serve as prominent recreational spaces attracting diverse visitors and represent different typologies of urban parks in Lagos.

3.3. Data Collection Methods

3.3.1. Site Observation

A structured observation checklist was used to document landscape features such as vegetation, pathways, seating areas, lighting systems, and maintenance conditions.

3.3.2. Questionnaire Survey

Structured questionnaires were administered to park users to evaluate their experiences and satisfaction levels. A total of [XXX] respondents participated in the survey.

3.3.3. Photographic Documentation

Photographs were taken to capture landscape conditions and park facilities for visual analysis and comparative documentation.

3.4. Sampling Technique

Random sampling was used in selecting respondents within the park environments. Visitors present during the study period were invited to participate in the survey.

3.5. Data Analysis

Quantitative data from questionnaires were analyzed using descriptive statistics (frequencies, percentages, means, standard deviations) and inferential statistics (independent t-tests, Pearson correlation) using SPSS version 26.0. Cronbach's alpha was calculated to assess the internal consistency of the satisfaction scale ($\alpha = 0.87$), indicating high reliability. Observational data were interpreted qualitatively using thematic analysis.

3.6. Observation Checklist

The following landscape elements were assessed during fieldwork:

Table 1:

Landscape Element	Condition	Observations	Remarks
Pathways			
Vegetation			
Seating Areas			
Lighting			
Waste Bins			
Signage			
Water Features			

3.7. Ethical Considerations

Ethical approval for this study was obtained from the Caleb University Research Ethics Committee (Ref. No.: CU/ETH/2024/089). Informed consent was obtained from all

participants prior to data collection. Participants were assured of anonymity and the right to withdraw at any point without consequence.

4. Questionnaire Instrument

Section A: Socio-Demographic Information

1. **Gender:** ☐ Male ☐ Female ☐ Prefer not to say
2. **Age Group:** ☐ Under 18 ☐ 18–25 ☐ 26–35 ☐ 36–45 ☐ 46–60 ☐ Above 60
3. **Occupation:** ☐ Student ☐ Employed ☐ Self-employed ☐ Unemployed ☐ Retired
4. **Level of Education:** ☐ Primary ☐ Secondary ☐ Tertiary ☐ Postgraduate
5. **Place of Residence:** ☐ Within park vicinity ☐ Same local government ☐ Outside local government

Section B: Park Usage Pattern

1. How often do you visit this park? ☐ Daily ☐ Weekly ☐ Monthly ☐ Occasionally ☐ First time
2. What time do you usually visit? ☐ Morning ☐ Afternoon ☐ Evening
3. What is your primary purpose for visiting the park? (Select all that apply) ☐
4. Relaxation ☐ Exercise ☐ Socializing ☐ Family outing ☐ Sightseeing ☐ Other:
5. How long do you typically spend in the park? ☐ Less than 1 hour ☐ 1–2 hours ☐ 3–4 hours ☐ More than 4 hours

Section C: Landscape Quality Assessment

Rate the following features of the park (1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent):

Table 2:

Feature	1	2	3	4	5
10. Cleanliness of the park	☐	☐	☐	☐	☐
11. Availability of greenery (trees, lawns, flowers)	☐	☐	☐	☐	☐
12. Aesthetic appeal (beauty/design)	☐	☐	☐	☐	☐
13. Maintenance of landscape elements	☐	☐	☐	☐	☐
14. Water features (fountains, ponds)	☐	☐	☐	☐	☐
15. Shade and shelter	☐	☐	☐	☐	☐
16. Seating facilities	☐	☐	☐	☐	☐

Section D: Facilities and Amenities

1. **Availability of recreational facilities (playgrounds, sports areas):** ☐ Very Poor ☐Poor ☐ Fair ☐ Good ☐ Excellent
2. **Condition of restrooms:** ☐ Very Poor ☐ Poor ☐ Fair ☐ Good ☐ Excellent
3. **Waste disposal facilities:** ☐ Very Poor ☐ Poor ☐ Fair ☐ Good ☐ Excellent
4. **Accessibility (ease of entry, signage, paths):** ☐ Very Poor ☐ Poor ☐ Fair ☐ Good ☐Excellent
5. **Safety and security within the park:** ☐ Very Unsafe ☐ Unsafe ☐ Neutral ☐ Safe ☐Very Safe

Section E: User Satisfaction

1. Overall, how satisfied are you with this park? ☐ Very Dissatisfied ☐ Dissatisfied ☐ Neutral ☐ Satisfied ☐ Very Satisfied
2. Does the park meet your expectations? ☐ Not at all ☐ Slightly ☐ Moderately ☐ Mostly ☐ Completely
3. How likely are you to revisit this park? ☐ Very Unlikely ☐ Unlikely ☐ Neutral ☐ Likely ☐ Very Likely
4. Would you recommend this park to others? ☐ Yes ☐ No

Section F: Perceived Benefits

1. What benefits do you gain from using this park? (Select all that apply) ☐ Physical health ☐ Mental relaxation ☐ Social interaction ☐ Environmental awareness ☐ Other:

Section G: Challenges And Improvements

1. What challenges do you experience in this park? ☐ Poor maintenance ☐ Insecurity ☐ Overcrowding ☐ Lack of facilities ☐ Poor accessibility ☐ Other:
2. What improvements would you suggest?

Section H: General Comments

Additional comments or observations

5. DISCUSSION

5.1. Socio-Demographic Profile of Respondents

Of the 150 respondents, 52.7% were male and 47.3% female. The largest age group was 26–35 years (34.0%), followed by 18–25 years (28.7%). Most respondents were employed full-time (41.3%) or students (32.0%). The majority held tertiary education qualifications (62.0%).

5.2. Landscape Quality Assessment

Mean scores for landscape quality indicators are presented in Table 1. JJT Park scored higher than Finnih Park across all indicators, with statistically significant differences for cleanliness ($t=3.42$, $p<0.01$), aesthetics ($t=2.98$, $p<0.05$), and maintenance ($t=3.15$, $p<0.01$).

Table 3: Landscape Quality Indicators (Mean ± SD)

Indicator	JJT Park (n=75)	Finnih Park (n=75)	t-value	p-value
Cleanliness	4.2 ± 0.8	3.1 ± 1.1	3.42	<0.01
Greenery availability	4.4 ± 0.7	3.8 ± 1.0	2.15	0.034
Aesthetic appeal	4.3 ± 0.8	3.4 ± 1.0	2.98	<0.05
Maintenance	4.0 ± 0.9	2.9 ± 1.2	3.15	<0.01
Seating facilities	3.7 ± 1.1	3.2 ± 1.3	1.42	0.158
Lighting	3.5 ± 1.2	2.6 ± 1.4	2.64	<0.05

5.3. User Satisfaction

Overall satisfaction was significantly higher at JJT Park (mean=4.1 ± 0.8) than at Finnih Park (mean=3.2 ± 1.1; $t=3.67$, $p<0.001$). Pearson correlation revealed a strong positive relationship between landscape quality and user satisfaction ($r=0.74$, $p<0.01$).

5.4. Park Usage Patterns

Frequency of use varied: 28% visited weekly, 34% monthly, and 22% occasionally. Primary purposes for visiting included relaxation (68%), exercise (52%), and family outings (44%). Morning visits were most common (48%), followed by afternoon (32%) and evening (20%).

6. Conclusion

The evaluation of landscape quality and user satisfaction reveals how well the selected parks meet the needs of visitors. Positive features such as attractive landscaping, accessible pathways, and comfortable seating areas significantly improve visitor experience (Gehl, 2011; Whyte, 1980) [4, 11]. The strong correlation between landscape quality and user satisfaction (r=0.74) aligns with Kaplan and Kaplan's (1989) [5] Attention Restoration Theory, which suggests that well-designed natural environments restore cognitive function and reduce mental fatigue.

However, certain challenges reduce user satisfaction. These include inadequate maintenance, limited seating areas, insufficient lighting, and poor waste management—particularly at Finnih Park. Identifying these issues through observation and user surveys allows the study to provide meaningful recommendations for improving park design and management (Marcus & Francis, 1998) [8].

Comparing the performance of the two parks highlights differences in landscape quality and user experience. JJT Park, with its formal garden design and water features, appeals more to visitors seeking aesthetic and passive recreational experiences. In contrast, Finnih Park, with its sports facilities and open lawns, attracts users seeking active recreation, but suffers from lower maintenance and safety standards. These differences offer insights that can guide future urban park development in Lagos.

Furthermore, the physical environmental quality of public spaces has been shown to directly influence user satisfaction and overall experience (Ademakinwa *et al*., 2024) [1]. Parks that are well-maintained, safe, and accessible are more likely to be used frequently and to generate positive user feedback. This finding aligns with Babamboni *et al*. (2025) [2], who argue that Biophilic design principles—including direct and indirect nature integration, sensory zoning, and material grounding—can significantly mitigate urban stress and enhance psychological resilience when applied to public spaces in Lagos.

6.1. Limitations of the Study

This study has several limitations. First, data were collected during dry-season weekdays and weekends; findings may not generalize to rainy-season conditions. Second, the study focused on two parks in Ikeja, Lagos, limiting geographical generalizability. Third, the cross-sectional design captures user perceptions at a single point in time. Future research should employ longitudinal designs and include a broader range of parks across different Lagos municipalities.

7. Conclusion

Urban parks play an important role in improving the environmental quality and livability of cities. Through a post-occupancy evaluation of Johnson Jakande Tinubu Park and Dr. Oluyomi Abayomi Finnih Recreational Park, this study has demonstrated how landscape design influences user satisfaction and park performance.

The research highlights the importance of evaluating landscape environments after construction to ensure that they effectively meet the needs of users. Post-occupancy evaluation provides valuable feedback that can guide improvements in landscape design, planning, and management.

Key findings indicate that:

1. Landscape quality directly correlates with user satisfaction (r=0.74);
2. Accessibility, safety, and maintenance are foundational to positive user experiences;
3. Different user groups have varying needs that park design must accommodate.

This study reinforces the broader argument that architecture and landscape design must function as preventive health interventions, particularly in high-density African megacities where psychological stressors are endemic (Babamboni *et al*., 2025) [2] Improving accessibility, maintenance, safety, and recreational facilities will enhance the usability and attractiveness of urban parks in Lagos. Future landscape projects should incorporate user feedback and continuous evaluation to ensure long-term sustainability and public satisfaction.

8. Recommendations

Based on the findings of this study, the following recommendations are proposed:

1. **Enhance Maintenance Practices:** Regular maintenance of vegetation, pathways, seating areas, and waste disposal systems should be prioritized to sustain landscape quality.
2. **Improve Safety and Security:** Installation of adequate lighting, security personnel presence, and surveillance systems will increase user confidence and encourage evening visits.
3. **Upgrade Recreational Facilities:** Additional playgrounds, exercise equipment, and sports facilities should be provided to cater to diverse user needs.
4. **Increase Accessibility:** Parks should be designed with universal access principles, including barrier-free pathways and clear signage for all age groups and abilities.
5. **Incorporate User Feedback Mechanisms:** Regular post-occupancy evaluations should be conducted to continuously improve park performance based on user input.

References

1. Ademakinwa OO, Onamade AO, Adewumi BJ, Adenubi OO, Alagbe OA. Impact of accommodation on job performance at Caleb University, Imota-Lagos State, Nigeria. Caleb International Journal of Development Studies. 2024;7(1). doi:10.26772/cijds-2024-07-01-013.
2. Babamboni AS, Ogunleye VT, Ajayi OO, Dare-Abel OA. Urban parks and user well-being in Lagos State: Evaluating adequacy in selected LGAs. African Journal of Environmental Sciences and Renewable Energy. 2025;18(1):138-153. doi:10.62154/ajesre.2025.018.010696.
3. Carr S, Francis M, Rivlin L, Stone A. Public Space. Cambridge: Cambridge University Press; 1992.
4. Gehl J. Life Between Buildings: Using Public Space. 6th ed. Washington, DC: Island Press; 2011.

5. Kaplan R, Kaplan S. The Experience of Nature: A Psychological Perspective. Cambridge: Cambridge University Press; 1989.
6. Lawanson T. Design articulation of open spaces in metropolitan Lagos, Nigeria. African Journal of Environmental Science and Technology. 2024.
7. Lynch K. The Image of the City. Cambridge (MA): MIT Press; 1960.
8. Marcus CC, Francis C. People Places: Design Guidelines for Urban Open Space. 2nd ed. New York: John Wiley & Sons; 1998.
9. Preiser WFE, Vischer JC. Assessing Building Performance. Oxford: Elsevier Butterworth-Heinemann; 2005.
10. Relph E. Place and Placelessness. London: Pion; 1976.
11. Whyte WH. The Social Life of Small Urban Spaces. New York: Project for Public Spaces; 1980.

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