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Post-Occupancy Evaluation of Community Centres in Southwestern Nigeria: Assessing Spatial Quality, Environmental Performance, and User Satisfaction

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Abstract

Community centres are civic social infrastructure whose usefulness depends on spatial organisation, environmental comfort, inclusive access and ongoing maintenance. This study examined user-reported performance of community centres in Southwestern Nigeria and contextualised the findings against four architecturally documented cases (two Nigerian field-appraised centres and two international desk-based precedents). A cross-sectional purposive survey included 150 users, comprising 75 respondents at Mapo Hall and 75 at Kola Daisi Ibadan Civic Centre; responses were pooled and analysed using descriptive statistics and a reported bivariate correlation. The mean of nine spatial-functional item means was 3.32/5; movement and orientation (M = 3.53) and circulation/seating (M = 3.51) were strongest, whereas inclusive accommodation (M = 3.10), signage (M = 3.14) and furniture/equipment (M = 3.15) were weakest. Ten environmental-management items averaged 3.25/5; lighting, ventilation and air quality ranked highest (M = 3.39), and maintenance lowest (M = 3.04). The reported aggregate socio-economic/cultural association with satisfaction was weak and not significant ($r = -0.144$, $p = 0.079$), although the construction of this aggregate could not be verified. Among 147 respondents to the improvement question, maintenance (46.9%), greener and more comfortable environments (27.2%) and accessibility (12.2%) were the main priorities. The findings suggest moderately favourable perceived functionality alongside specific deficits in inclusion and upkeep. A user-centred design–management approach is recommended, integrating accessible routes, legible information, adaptable rooms, appropriate environmental strategies, maintainability and repeated occupancy feedback.

Keywords: Community Centres, Post-Occupancy Evaluation, User Satisfaction, Inclusive Architecture, Spatial Quality, Environmental Comfort, Facility Management, Nigeria.

Introduction

Community centres occupy a distinctive position in the built environment because they are simultaneously buildings, service platforms and social settings. A single centre may host meetings, recreation, cultural events, skills training, youth activities, health outreach, ceremonies, informal encounters and local governance. This multifunctionality means that architectural performance is not reducible to whether rooms exist or whether a facility was successfully constructed. The more consequential question is whether occupied spaces are easy to reach, easy to understand, adaptable to changing activities, environmentally comfortable, inclusive of diverse users and sufficiently maintained to sustain their intended functions. In that sense, community-centre quality is an everyday performance question rather than only a design-intention question.

Recent scholarship increasingly conceptualises community facilities as social infrastructure. McShane and Coffey (2022) argue that community hubs can operate as critical local infrastructure because they support social connectedness, service delivery and community capacity, while also becoming important during emergencies and periods of disruption. A broader scoping review by Enneking, Custers and Engbersen (2025) similarly shows that social infrastructures include public institutions and recreational facilities whose physical, organisational and social qualities affect belonging, collective action, access to services and sociality. These perspectives are especially relevant to rapidly urbanising African cities, where civic and community facilities often have to serve multiple roles under constrained public infrastructure and uneven maintenance regimes.

Within architecture, post-occupancy evaluation (POE) provides a systematic means of examining how buildings perform once they are in use. Classic POE scholarship positioned occupied buildings as sources of evidence for improving design decisions, operational practices and future projects (Preiser et al., 1988). More recent work has reaffirmed this logic. Elsayed et al. (2023), in a systematic review of European POE practice, describe POE as a process for evaluating actual building performance, including indoor environmental quality and occupant satisfaction, while also noting persistent inconsistencies in methods and reporting. Zhao et al. (2024) similarly emphasise the value of occupant-centred feedback for understanding thermal comfort and building-energy performance. POE is therefore not simply a satisfaction survey; it is a feedback mechanism that links human experience with spatial, technical and managerial performance.

The relevance of POE is particularly strong for community centres because the same space may be used by people of different ages, abilities, cultural backgrounds and activity patterns. The building must therefore mediate potentially competing requirements: openness and security, flexibility and acoustic control, symbolic identity and legibility, indoor comfort and low operating cost, as well as broad accessibility and efficient management. Yu and Woo (2023), studying community centres in Seoul, found that satisfaction with easy access was positively associated with frequency of use and that walkable surroundings and nearby amenities also supported centre use. The finding is important because it shifts attention from the mere availability of a community centre to the quality of access and experience that makes continued use more likely.

Evidence from Nigerian public and community-oriented facilities points to similar performance concerns. Adedayo et al. (2023) found that users of Peyi Community Park in Bwari, Abuja, experienced positive social interaction but reported deficiencies in basic amenities, adequate spaces, privacy and security.

Adewale and Odewumi (2024), examining inclusive architectural strategies in selected community centres in Lagos Mainland, identified evidence of inclusive practices but also opportunities for more comprehensive adoption. In government office buildings in Kwara State, Makinde et al. (2024) found moderate satisfaction and recommended facility upgrading and continued evaluation. Recent evidence also shows that specific environmental strategies, including acoustic treatments, can influence user satisfaction in convention centres (Oluwatayo & Adele, 2024; Odeyale, and Adelaja, 2025) while Jegede and Enwonwu (2025) demonstrate the usefulness of user perception in evaluating the cultural, environmental, social and economic performance of art and cultural centres.

Despite these contributions, the evidence base for community-centre performance in Nigeria remains fragmented. Much of the local POE literature addresses housing, offices, educational buildings, leisure facilities or specialised cultural buildings. Fewer studies examine community centres as integrated socio-spatial systems in which spatial layout, multipurpose functionality, environmental comfort, inclusive access, landscape, maintenance and management are assessed together. This gap matters because community centres are often designed or commissioned by government, civic associations, religious groups and non-profit organisations without a robust feedback loop from existing occupied facilities. Where lessons are not systematically captured, recurrent problems such as inaccessible entrances, poor wayfinding, inadequate support spaces, weak maintenance planning and environmental discomfort may be reproduced in new projects.

The present investigation addresses a gap between the documented promise of community centres as social infrastructure and evidence about how their buildings function after occupation. International POE research emphasises the systematic use of occupants' perceptions to evaluate functional and environmental quality (Preiser et al., 1988; Vischer, 2008; Elsayed et al., 2023; Odeyale, 2026). However, comparable evidence remains relatively limited for multipurpose civic facilities in Southwestern Nigeria. By combining pooled questionnaire ratings with a structured comparison of architecturally documented local and international examples, the study identifies recurring user concerns and translates them into design and management recommendations. Its contribution lies in examining occupied performance rather than assessing the merits of a proposed building.

The overall aim is to assess perceived spatial-functional and environmental-management performance of selected community centres in Southwestern Nigeria and identify implications for future design and operation. Five specific objectives guide the study: (1) describe the socio-demographic profile and use patterns of respondents; (2) assess perceptions of spatial-functional and environmental-management qualities; (3) examine the reported aggregate relationship between socio-economic/cultural characteristics and satisfaction, acknowledging its analytical limitations; (4) identify user-prioritised improvements; and (5) compare the survey themes with architectural lessons from the documented case studies. Corresponding research questions are: (RQ1) What are the characteristics and reported use patterns of respondents? (RQ2) How are spatial-functional and environmental-management attributes rated? (RQ3) What does the reported aggregate association suggest about characteristics and satisfaction? (RQ4) Which improvements do respondents prioritise? (RQ5) How do the architectural cases illuminate the main questionnaire findings? The descriptive and comparative design does not establish causal relationships.

Review of Related Literature

Community Centres as Social Infrastructure

The concept of social infrastructure provides an appropriate foundation for understanding why community-centre performance has consequences beyond the building envelope. Social infrastructure

refers broadly to places, institutions and organisations that support social life, relationships, collective activity and access to services. Community centres are explicit examples because their value is generated through repeated use: people meet, organise, learn, exercise, celebrate, seek support and build familiarity with others. Enneking et al. (2025) show that the functioning of social infrastructure depends on physical, organisational and social characteristics rather than on physical provision alone. A poorly maintained, inaccessible or socially unwelcoming facility may therefore exist as infrastructure in a technical sense while performing weakly as social infrastructure (Odeyale, T.O. and Bello, 2026).

McShane and Coffey (2022) extend this argument by describing community hubs as institutions that can support education, health, social services, community capacity and resilience. Their work is important for architectural evaluation because it implies that adaptability is not an optional aesthetic preference. A centre that can reorganise space, maintain access and support changing programmes is better positioned to respond to everyday variation and extraordinary demands. In Nigerian cities, where community facilities may simultaneously serve social events, civic meetings, training, welfare activities and emergency functions, this multifunctional expectation is particularly pronounced.

The social-infrastructure perspective also highlights equity. Public usefulness depends not only on how many people can theoretically enter a building but on whether different groups can actually approach, understand and use it with dignity. Universal access, legible information, safe circulation and suitable facilities for different ages and abilities are therefore integral to social performance. The spatial environment can either widen participation or reproduce exclusion. Community-centre evaluation must consequently consider inclusion as a performance outcome, not merely a regulatory checklist.

Post-Occupancy Evaluation and the Performance Feedback Loop

POE emerged from a concern that conventional architectural processes often end at project completion, even though the most important evidence about performance appears only after occupation. Preiser et al. (1988) formalised POE as a systematic examination of buildings in use, while Vischer (2008) developed a user-centred understanding of the built environment in which satisfaction reflects the degree of fit between people, tasks and environmental conditions. The central implication is a feedback loop: occupied experience is analysed, deficiencies are identified, management can respond, and future designs can incorporate lessons from actual use.

Contemporary reviews show that POE now encompasses technical, functional, behavioural and environmental variables. Elsayed et al. (2023) found that POE studies commonly investigate occupant satisfaction and indoor environmental quality alongside building performance, although methodological inconsistency remains a challenge. Zhao et al. (2024) similarly show that occupant-centred feedback is increasingly integrated with thermal and energy evaluation. In practice, POE can range from questionnaire-based assessments to mixed methods that combine interviews, observations, sensor measurements, energy data and spatial analysis. The appropriate level depends on the research question, resources and building type.

For community centres, a user-centred POE is particularly valuable because the building's success is mediated by behaviour and patterns of use. Zeng et al. (2024), evaluating ten urban underground complexes, identified signage, safety communication, spatial proportions and morphology as factors affecting satisfaction. Hassanain et al. (2024) used technical, functional and behavioural performance indicators in the POE of a smart university building. Although neither building type is identical to a community centre, both studies demonstrate that satisfaction emerges from the interaction of spatial comprehension, environmental conditions, service systems and user expectations. This multidimensional logic underpins the analytical structure used in the present study.

User Satisfaction and Person-Environment Fit

User satisfaction is often treated as a summary judgement of whether an environment meets expectations and supports intended activities. In architectural settings, it includes cognitive evaluations of functionality, affective responses to comfort and atmosphere, and behavioural implications such as willingness to remain, return or recommend a place. Vischer's (2008) user-centred theory is useful because it avoids treating satisfaction as a purely subjective preference detached from the physical environment. Instead, comfort and satisfaction arise from the degree to which spatial and environmental conditions support users' activities and reduce unnecessary effort or stress.

This interpretation is especially relevant to community centres. A multipurpose hall may be technically large enough but still perform poorly if furniture cannot be rearranged, storage is inadequate, acoustics are uncontrolled, or circulation becomes congested during events. A naturally ventilated room may provide acceptable comfort under ordinary occupancy but become uncomfortable when full. Likewise, a visually impressive landmark may strengthen identity while creating access difficulties for older people or people with disabilities. Satisfaction therefore reflects a bundle of relationships between users, activities, space, services and management rather than a single property of the building.

The distinction between objective performance and perceived performance is also important. POE research shows that users do not always experience conditions in the same way that technical models predict. Muhammad, Taki and Khattak (2025), for example, found discrepancies between predicted thermal neutrality and actual thermal sensation in Abuja office buildings. This supports the methodological value of direct user feedback, while also demonstrating why subjective evaluation should ideally be complemented by physical measurements in more advanced studies.

Spatial Organisation, Circulation and Wayfinding

Spatial legibility is a fundamental component of public-building performance. Users need to understand where entrances, destinations, toilets, activity rooms and exits are located, and how routes connect. Legibility is produced through plan configuration, visual connections, landmarks, hierarchy, signage and consistency in spatial cues. When these elements work together, movement requires less cognitive effort and first-time visitors can navigate with greater confidence. When they conflict, users may experience confusion, backtracking, congestion or dependence on staff assistance.

Recent POE evidence reinforces the practical importance of wayfinding. Zeng et al. (2024) found that signage identity, safety signs, broadcast effectiveness and spatial morphology were among environmental factors associated with satisfaction. Ma et al. (2024) similarly emphasise user perception of complex spatial environments in their importance-performance assessment of an urban underground complex. Community centres are less spatially complex than major underground facilities, but they often contain mixed public, semi-public and service zones. Clear zoning and directional information are therefore necessary, especially where occasional users predominate.

Circulation quality also affects social interaction. Corridors, lobbies, foyers, courtyards and seating zones are not merely movement infrastructure: in community buildings they frequently become informal meeting spaces. Visual connections and appropriate circulation widths can support encounters, legibility and supervision; however, excessive or poorly articulated circulation may reduce usable activity space. Public-building research therefore calls for balancing efficient movement, clear signage, safety and opportunities for informal social use (Zeng et al., 2024; Ma et al., 2024; Odeyale and Adeleke, 2026; Odeyale & Jegede, 2026).

Flexibility, Multifunctionality and Supporting Facilities

Flexibility is central to community-centre value because programming changes across the day, week and life of the building. A room may host training in the morning, a meeting in the afternoon and a social event in the evening. Long-term adaptability is equally important as population structure, technologies and community priorities change. However, flexibility should not be confused with simply providing large open halls. Functional flexibility depends on room proportions, movable partitions or furniture, access to storage, electrical and digital services, acoustic separation, lighting options and the ability to reconfigure without disrupting adjacent uses.

Flexibility must be evaluated as operational capacity rather than simply as the availability of large rooms. Usable adaptability depends on proportional rooms, movable furnishings, storage, audio-visual and electrical infrastructure, acoustic separation, scheduling and the possibility of changing activities without undue disruption. These provisions are particularly pertinent to facilities expected to support both everyday community programmes and large occasional events (McShane & Coffey, 2022).

User satisfaction is also likely to be affected when supporting elements are overlooked. Furniture quality, storage, toilets, changing facilities, kitchens, audio-visual infrastructure, power supply and accessibility features may appear secondary during early design, but they often determine whether programmes can operate safely, conveniently and inclusively. Evaluations should therefore consider the entire setting required for participation rather than the room shell alone.

Inclusive Architecture and Universal Access

Inclusive architecture requires environments to be usable by the widest practical range of people without unnecessary segregation or dependence (Odeyale and Babatunde, 2025). In community facilities this includes step-free routes, appropriate door widths, accessible toilets, handrails, suitable seating, clear signage, safe surfaces, visual and auditory information, and spatial layouts that accommodate mobility devices. Inclusion also extends beyond physical disability to age, gender, sensory needs and cultural differences. Because community centres are intended to serve broad publics, inclusive performance is a central measure of civic legitimacy.

Adewale and Odewumi (2024) provide directly relevant Nigerian evidence. Their study of three community centres in Lagos Mainland found commendable adoption of some inclusive strategies but identified opportunities for more holistic alignment with inclusive design principles. Sholanke and Jegede (2024), examining universal-design strategies in a Lagos leisure setting, likewise illustrate the value of measuring users' satisfaction with inclusive features rather than assuming compliance from design intent alone. These studies support this article's treatment of inclusive access as a user-experience variable.

Universal access should be evaluated across the complete user journey, including arrival, entrance, circulation, seating, sanitary facilities and egress. The physical availability of individual inclusive elements is insufficient where routes are interrupted or information cannot be used by people with different needs. Nigerian evidence on leisure and community facilities likewise underscores the need for holistic assessment rather than assumptions based on architectural intention (Adewale & Odewumi, 2024; Sholanke & Jegede, 2024; Odeyale. and Adeleke, 2026).

Indoor Environmental Quality: Lighting, Ventilation, Thermal Comfort and Acoustics

Indoor environmental quality (IEQ) mediates the bodily experience of occupied space. Lighting, ventilation, air quality, thermal conditions and acoustics affect comfort, concentration, communication and duration of stay. In community centres these factors are particularly variable because occupancy

can shift rapidly and activities range from quiet reading to crowded ceremonies. A design that performs adequately at low occupancy may fail under peak loads; conversely, permanently intensive mechanical conditioning can impose high energy and maintenance costs.

Recent POE work in Nigeria strengthens the case for evaluating experience. Muhammad et al. (2025) compared thermal comfort in green and conventional office buildings in Abuja and found that occupant feedback diverged from predicted thermal conditions, suggesting opportunities to adjust cooling setpoints while improving energy efficiency. Owolabi, Afolami and Adedeji (2024) reported perception-based concerns with indoor air quality in lecture theatres in Akure. These studies demonstrate that tropical building performance requires both climate responsiveness and attention to how occupants perceive the resulting conditions.

Acoustics are equally relevant in community buildings because speech, music, meetings and simultaneous activities can generate conflict. Oluwatayo and Adele (2024) found that acoustic design strategies influenced user satisfaction in selected convention centres in Lagos. Their findings reinforce the importance of absorptive materials, appropriate furniture and noise-control strategies. In the present study, noise control was one of the lower-rated environmental-management attributes, suggesting that acoustic planning should be treated as a functional requirement rather than a specialist concern introduced late in design.

Tropical community buildings may rely on passive strategies such as daylighting, large shaded openings and cross-ventilation or on mechanical cooling for high-occupancy events. Neither approach guarantees satisfactory indoor environmental quality independently of occupancy level, maintenance, building orientation and environmental control. A robust POE should combine reported comfort with, where available, measured temperature, humidity, air movement, illuminance and acoustic conditions (Muhammad et al., 2025; Owolabi et al., 2024).

Maintenance, Cleanliness and Operational Responsiveness

Maintenance is the bridge between design quality and long-term performance. Materials deteriorate, equipment fails, drainage blocks, furniture breaks and landscape degrade. Where maintenance systems are weak, even well-designed facilities can become uncomfortable, unsafe or visually neglected. Users often experience maintenance as a combined judgement of cleanliness, promptness of repair, functionality of equipment and confidence that management responds to problems. For this reason, maintenance belongs within architectural performance analysis rather than being treated only as a post-design management issue.

Nigerian POE studies frequently identify maintenance and infrastructure as recurring concerns. Okopi (2023), examining neighbourhood infrastructure satisfaction in a public residential estate in Kano, recommended management intervention, upgrading and maintenance where services and open-space facilities were poorly rated. Makinde et al. (2024) similarly found a need for facility improvements in Kwara State government buildings. Evidence from large-scale hospitality review analysis also shows that cleanliness, maintenance and facilities can be major sources of occupant dissatisfaction (Zhang et al., 2023), illustrating the general importance of operational upkeep across building types.

Maintainability begins during design. Durable finishes, accessible service routes, replaceable components, sensible detailing, local availability of parts, landscape-management requirements and realistic operating budgets influence whether a facility can sustain its intended standard. Technology should therefore be selected against realistic operational and maintenance capacity rather than design-stage performance claims alone.

Landscape, Outdoor Space and Social Comfort

Outdoor space extends the social capacity of community centres. Forecourts, courtyards, shaded seating, landscaped edges, play areas and informal gathering zones can absorb overflow, support casual interaction and provide climatic relief. In warm climates, usable outdoor space is particularly valuable because it can increase the effective social area of a facility without fully conditioned enclosure. Its performance depends on shade, vegetation, security, seating, drainage, lighting and connection to indoor activities.

Adedayo et al. (2023) demonstrate that community parks can support interaction across social and cultural groups, while also showing how inadequate amenities and security weaken user experience. Ouyang et al. (2025), in a POE of community renewal in Chengdu, treat green space and comfort as elements of resident satisfaction. Nigerian youth-centre research by Ogunleye et al. (2025) also reports strong preferences for shaded green outdoor areas and flexible interior layouts. Together, these studies support the interpretation of landscape as functional social infrastructure rather than decorative treatment.

Integrated forecourts, courtyards, terraces and landscaped gathering spaces can connect formal programmes with informal civic life. These areas can support waiting, social interaction, overflow use and locally appropriate microclimatic relief when shade, accessibility, security and drainage are considered together (Adedayo et al., 2023; Ouyang et al., 2025).

User Characteristics, Patterns of use and Satisfaction

Satisfaction is influenced not only by building characteristics but also by who uses the building, how often they use it and for what purpose. Frequent users may notice maintenance problems that occasional visitors overlook; older users may place greater emphasis on seating and accessibility; event participants may prioritise crowd movement and acoustics; and programme users may value equipment, storage and service support. Consequently, many POE studies examine demographic and behavioural variables alongside environmental ratings.

Yu and Woo (2023) show the importance of separating stated preferences from actual satisfaction and use behaviour. In their Seoul study, preference for easy access did not significantly increase use, but satisfaction with actual accessibility did. This distinction is useful for community-centre design because it demonstrates that expressed ideals are less meaningful than the experienced quality of access. The physical setting, walkability and available amenities also affected use. The lesson for Nigerian centres is that planning and design decisions should be tested against real patterns of access and occupation.

Age, education, cultural context, purpose of visit and frequency of use may influence how public-building features are experienced. However, demographic comparison requires adequately varied samples, an explicit definition of each construct and properly specified statistical analysis. Self-reported frequency categories should not be treated as objectively measured attendance unless independent records support that interpretation.

Nigerian Evidence, Research Gap and Analytical Framework

The emerging Nigerian literature demonstrates growing interest in user-centred building performance but remains dispersed across building types. Studies have investigated community parks (Adedayo et al., 2023), public housing and neighbourhood infrastructure (Okopi, 2023), acoustic satisfaction in convention centres (Oluwatayo & Adele, 2024), inclusive design in community centres (Adewale & Odewumi, 2024), government office performance (Makinde et al., 2024), air-quality perceptions in educational buildings (Owolabi et al., 2024), neo-vernacular cultural centres (Jegede & Enwonwu,

2025), thermal comfort in Abuja offices (Muhammad et al., 2025) and climate-responsive youth-centre strategies (Ogunleye et al., 2025). This breadth is useful, but there remains a need for integrated evaluation of multipurpose community centres that brings together spatial, functional, environmental and management dimensions.

The analytical framework adopted here distinguishes perceived spatial-functional attributes from environmental-management attributes while recognising the importance of user context. Conceptually, accessibility, circulation, activity support, comfort and maintenance may jointly shape the fit between people and community facilities; no causal pathway is tested in this cross-sectional study. Together, these domains provide an interpretive framework for the descriptive results and architectural comparison (Vischer, 2008; Elsayed et al., 2023).

Methodology

This descriptive post-occupancy evaluation combines (i) a cross-sectional questionnaire survey of community-centre users and (ii) qualitative architectural appraisal. The survey is the principal empirical source for satisfaction and improvement priorities. The architectural cases provide contextual illustrations and are not treated as additional survey respondents or statistically comparable observations. This distinction avoids equating desk-based international precedents with local respondent-level evidence.

Questionnaire responses were obtained at two community-centre sites in Ibadan, Nigeria: Mapo Hall (n = 75) and Kola Daisi Ibadan Civic Centre (n = 75). The total of 150 responses was analysed as one pooled sample. The survey was cross-sectional, and no data were collected from users of the two international architectural precedents. Because site-specific item response distributions were not available for comparative analysis, the reported satisfaction statistics describe the combined sample rather than differences between buildings.

Architectural Cases: Inclusion and Appraisal

Four purposively selected architectural cases were examined: Firstenburg Community Centre, Vancouver, Washington, United States (2007); Jewish Community Centre, Mainz, Germany (2010); Mapo Hall, Ibadan, Nigeria (1929); and Kola Daisi Ibadan Civic Centre, Ibadan, Nigeria (2009). The two international cases were considered as desk-based precedents, while the two Ibadan centres constituted the Nigerian field-appraisal and questionnaire sites. Their selection permitted qualitative comparison of civic function, architectural identity, circulation, inclusive access and environmental strategies across distinct building types and contexts.

The appraisal examined programmes and facilities, architectural character, spatial hierarchy and circulation, natural lighting and ventilation, building services, accessibility, fire-safety provisions and operational constraints. Photographs and spatial descriptions informed the appraisal of the two Nigerian centres; published plans and photographs informed the desk-based assessment of the international precedents. Findings are presented as qualitative design observations rather than standardised technical, fire-safety or accessibility audit scores (Table 1).

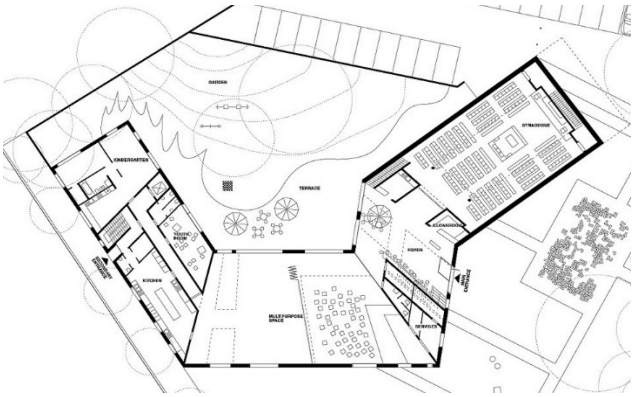


Figure 1: Jewish Community Centre, Mainz: ground-floor plan. Source: ArchDaily.

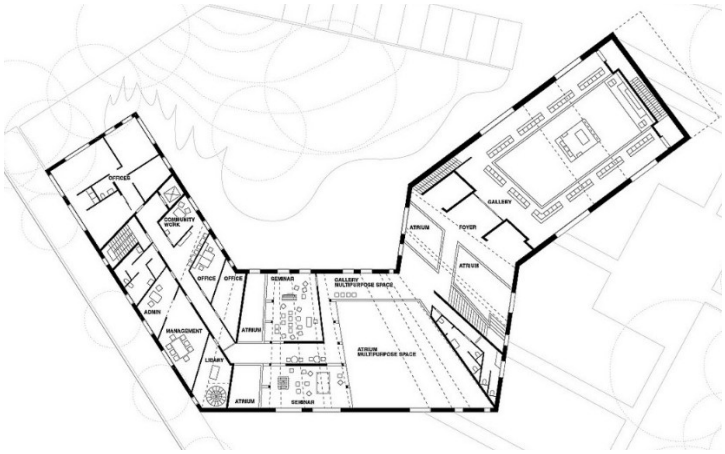


Figure 2: Jewish Community Centre, Mainz: first-floor plan. Source: ArchDaily.



Plate 1: Jewish Community Centre, Mainz: exterior. Source: ArchDaily.



Figure 3: Mapo Hall, Ibadan: aerial site context.
Source: Google Maps**.**



Plate 2: Mapo Hall, Ibadan: exterior view. Source: Authors' fieldwork photographs, 2026.



Figure 4: Kola Daisi Ibadan Civic Centre: aerial site context. Source: Google Maps.



Plate 3: Kola Daisi Ibadan Civic Centre: exterior view. Source: Authors' fieldwork photographs, 2026.
Figure sources: The international plans and photographs are credited to ArchDaily, the map images to Google Maps, and the Nigerian field photographs to the authors (2026), as indicated in the figure and plate captions.

Survey Population and Recruitment

The study population comprised people who had used either of the two Nigerian community centres. Respondents were selected using non-probability purposive sampling, with 75 completed questionnaires from Mapo Hall and 75 from Kola Daisi Ibadan Civic Centre (N = 150; 50.0% per site). The initial sample-size planning used Slovin's formula and reported a requirement of 128, which was increased to 150 for the two-site survey. Because purposive rather than probability sampling was used, the resulting sample should not be treated as statistically representative of the wider user population. Questionnaires were analysed together. In the usage-frequency question, "occasionally" was a separate self-reported option alongside daily, weekly and monthly use, rather than a category defined by a specific attendance interval.

Questionnaire and Measured Attributes

The structured questionnaire covered respondent demographics and frequency of centre use, nine spatial-functional attributes, ten environmental-management attributes and a question on priorities for improvement. Respondents rated the specified attributes using a five-point Likert-type response scale; higher means indicate stronger agreement with the positively worded attributes. The reported domain averages are unweighted arithmetic averages of the respective item means, not separate measures derived from respondent-level scale scores. The available record provides pooled summary results rather than the original item-level questionnaire responses.

Data Handling and Analysis

Questionnaire results were processed in IBM SPSS Statistics version 29 and summarised using frequencies, valid percentages, mean item ratings and sample standard deviations where reliable values were available. The averages reported for the spatial-functional (nine items) and environmental-

management (ten items) domains are arithmetic averages of item means, not respondent-level composite scores. The reported bivariate correlation was interpreted as exploratory because the construction and coding of the aggregate demographic measure were not documented sufficiently for independent replication. Two standard deviations from the spatial-functional summary did not pass a discrete-response plausibility check and were therefore not reported as empirical estimates. No unobserved data or model-generated values were substituted for them.

Study Limitations and Ethical Reporting

Interpretation is limited by purposive recruitment, the young and highly educated profile of the respondents, pooled rather than site-specific satisfaction data and the absence of direct physical measurements of environmental performance. The available study documentation does not specify an ethics approval identifier or formal consent procedure; such details cannot be claimed without confirmation from the original research records. The two unavailable item standard deviations are identified transparently in Table 3.

Results

Comparative Architectural Case Appraisal

Across the four documented cases, the qualitative appraisal juxtaposes well-programmed and visually legible international community infrastructure with Nigerian civic buildings of different ages and servicing strategies. Table 1 records design strengths and noted constraints, without representing the cases as equivalent in size or cultural role. For the two Nigerian cases, the visual evidence is shown in Figures 3–4 and Plates 2–3; for Mainz, the available plans and photograph are in Figures 1–2 and Plate 1. The table is a qualitative interpretation of these materials rather than a structured user-score comparison.

Table 1. Qualitative comparison of the four documented architectural cases

Case	Context / date	Dominant strengths	Key limitations identified	Design and management implications
Firstenburg Community Centre	Vancouver, USA; 2007	Legible zoning; multi-generational programme; daylight/natural ventilation; integrated civic/recreation uses; advanced sustainability systems	Large scale can challenge new/older users; advanced systems require strong maintenance capacity	Combine flexible programming, clear circulation and environmental performance, but design technology around realistic operational capacity.
Jewish Community Centre	Mainz, Germany; 2010	Strong cultural identity; clear hierarchy of sacred/community spaces; controlled lighting; modern safety/services	Symbolic geometry may reduce immediate legibility for first-time users; highly specific cultural focus limits broad flexibility	Identity and belonging can strengthen satisfaction, but symbolic architecture should remain navigable and operationally clear.
Mapo Hall	Ibadan, Nigeria; 1929	Strong civic symbolism/heritage; large gathering capacity; high ceilings; verandas; passive airflow; forecourt social space	Elevated access and absence of ramps/lifts restrict universal access; fire safety below current expectations	Heritage and identity can sustain attachment, but adaptive retrofits must address inclusive access and contemporary safety.
Kola Daisi Ibadan Civic Centre	Ibadan, Nigeria; 2009	Large flexible halls; strategic transport location; parking; formal civic identity; mechanical comfort for events	Potential congestion during large events; high mechanical-energy dependence; weak universal access; fire-safety modernisation required	Event capacity should be paired with crowd-flow design, accessible routes, passive strategies and life-cycle operating considerations.

Respondent Characteristics and Patterns of Use

The respondent profile was concentrated among younger and highly educated users. Of the 150 respondents, 98 (65.3%) were male and 52 (34.7%) were female. Age was available for 149 respondents: 73 (49.0%) were aged 18–25 years and 55 (36.9%) were aged 26–35 years, meaning that 85.9% of valid age responses fell below 36 years. Only 21 respondents were aged 36 years or older. Marital status followed a similar pattern, with 109 (72.7%) single and 41 (27.3%) married respondents. Educational attainment was unusually high for a general community-centre sample: 74 respondents (49.3%) reported tertiary education, 75 (50.0%) postgraduate education and only one respondent secondary education. Occupational data were available for 146 respondents, among whom students formed the largest group (71; 48.6%), followed by civil servants (25; 17.1%), traders (8; 5.5%), retired respondents (3; 2.1%) and other occupations (39; 26.7%). Cultural/ethnic information was available for 143 respondents and was dominated by Yoruba participants (133; 93.0%), with five Edo respondents and five from other backgrounds.

Patterns of use indicate that the centres functioned primarily as occasional-event and recreation/meeting venues for the sampled users. Only three respondents (2.0%) reported daily use, 12 (8.0%) weekly use and eight (5.3%) monthly use; 127 (84.7%) used the centres occasionally. Recreation was the most common main purpose (71; 47.3%), followed by meetings (45; 30.0%). Education and skill training each accounted for 11 respondents (7.3%), religious activity for five (3.3%), and other purposes for seven (4.7%). The dominance of occasional use is important when interpreting wayfinding and accessibility, because occasional users may depend more strongly on clear spatial cues than frequent users who have learned the building over time.

Table 2. Study-site allocation, selected respondent characteristics and usage patterns (N = 150 unless otherwise indicated)

Characteristic	Category	n	%
Survey site	Mapo Hall, Ibadan	75	50.0
Survey site	Kola Daisi Ibadan Civic Centre	75	50.0
Gender	Male	98	65.3
Gender	Female	52	34.7
Age (n=149)	18–25	73	49.0
Age (n=149)	26–35	55	36.9
Age (n=149)	36–45	2	1.3
Age (n=149)	46–55	10	6.7
Age (n=149)	56+	9	6.0
Education	Secondary	1	0.7
Education	Tertiary	74	49.3
Education	Postgraduate	75	50.0
Frequency of use	Daily	3	2.0
Frequency of use	Weekly	12	8.0
Frequency of use	Monthly	8	5.3
Frequency of use	Occasionally	127	84.7
Main purpose	Meetings	45	30.0
Main purpose	Recreation	71	47.3
Main purpose	Education	11	7.3
Main purpose	Religious activity	5	3.3
Main purpose	Skill training	11	7.3
Main purpose	Other	7	4.7

Spatial-Functional Satisfaction

Among nine spatial-functional items, the arithmetic average of the published item means was 3.32 on a five-point response scale. Building layout for ease of movement and orientation (M = 3.53; SD = 0.98) and comfortable, accessible circulation/seating (M = 3.51; SD = 0.96) ranked highest. Multipurpose areas (M = 3.46; SD = 1.00) and adaptability to varied activities (M = 3.39; SD = 1.05) were also comparatively favourable. These are pooled, respondent-reported judgements rather than measured spatial-performance indices.

The lowest-rated items concerned inclusive accommodation for people with special needs (M = 3.10; SD = 1.13), signage/directions (M = 3.14; SD = 1.04) and furniture/equipment adequacy (M = 3.15). Interior welcome/comfort scored M = 3.35 and room-size adequacy M = 3.23. The exact standard deviations for interior welcome/comfort and furniture/equipment adequacy could not be reliably established from the available summary and are therefore not reported. The remaining item statistics are presented in Table 3.

The response distributions reinforce this interpretation. For easy movement/orientation, 54.7% of respondents selected agree or strongly agree, compared with 11.4% selecting disagree or strongly disagree. For special-needs accommodation, only 36.7% agreed or strongly agreed, while 32.0% disagreed or strongly disagreed and 31.3% were neutral. This near three-way division indicates uncertainty or uneven provision rather than a clear perception of inclusive performance.

Table 3. User ratings of spatial and functional qualities

Rank	Spatial-functional attribute	Mean	Sample SD
1	Building layout allows easy movement and orientation	3.53	0.98
2	Circulation and seating areas are comfortable and accessible	3.51	0.96
3	Multipurpose areas effectively serve different user groups/functions	3.46	1.00
4	Spatial layout supports a variety of activities	3.39	1.05
5	Interior is welcoming and comfortable	3.35	—
6	Centre/room sizes meet different user needs	3.23	1.08
7	Furniture and equipment are adequate and comfortable	3.15	—
8	Signage/directions are clear and helpful	3.14	1.04
9	Design accommodates special needs and promotes inclusivity	3.10	1.13

Note. SD = sample standard deviation; — = not reported because the available summary does not establish a valid observed value. For integer scores from 1 to 5 with n = 150, the lowest mathematically possible sample SDs compatible with the rounded means 3.35 and 3.15 are approximately 0.478 and 0.355, respectively. These are plausibility bounds only, not estimates of the observed standard deviations. Actual SDs require item-level responses or the corresponding SPSS output.

Environmental and Management Satisfaction

Environmental-management ratings were similarly moderate, with an average of the ten item means of 3.25. Lighting, ventilation and air quality received the highest mean (M=3.39, SD=1.07), followed by landscape/outdoor environment (M=3.33, SD=1.08) and temperature/thermal comfort (M=3.31, SD=1.06). Information and communication about activities/services recorded M=3.27, security M=3.26 and staff responsiveness M=3.25. Cleanliness/hygiene and overall management/environmental comfort each remained close to the domain average.

The weakest environmental-management attributes were noise control (M=3.20, SD=1.12) and maintenance (M=3.04, SD=1.08). For maintenance, 29.3% of respondents disagreed or strongly

disagreed that facilities were well maintained and issues addressed promptly, 40.0% were neutral, and only 30.7% agreed or strongly agreed. This distribution shows that maintenance is not simply a marginal low-ranked item; the largest response category was neutrality, suggesting inconsistent experiences or variable facility conditions, while negative ratings almost matched positive ratings.

The relative strength of lighting, ventilation and air quality is consistent with the passive environmental strategies observed in several local cases, including large openings, cross-ventilation and daylighting. However, the moderate rather than high mean suggests that passive provision alone does not eliminate comfort concerns, particularly in multipurpose spaces with variable occupancy and different activity loads.

Table 4. User ratings of environmental and management qualities

Rank	Environmental-management attribute	Mean	SD
1	Lighting, ventilation and air quality	3.39	1.07
2	Landscape/outdoor environment enhances experience	3.33	1.08
3	Temperature and thermal comfort	3.31	1.06
4	Information/communication about activities and services	3.27	1.01
5	Security measures are adequate	3.26	1.05
6	Management staff are courteous/professional/responsive	3.25	1.05
7	Cleanliness and hygiene	3.24	1.20
8	Overall management/environmental comfort and satisfaction	3.23	1.06
9	Noise levels are well controlled	3.20	1.12
10	Facilities are well maintained; issues addressed promptly	3.04	1.08

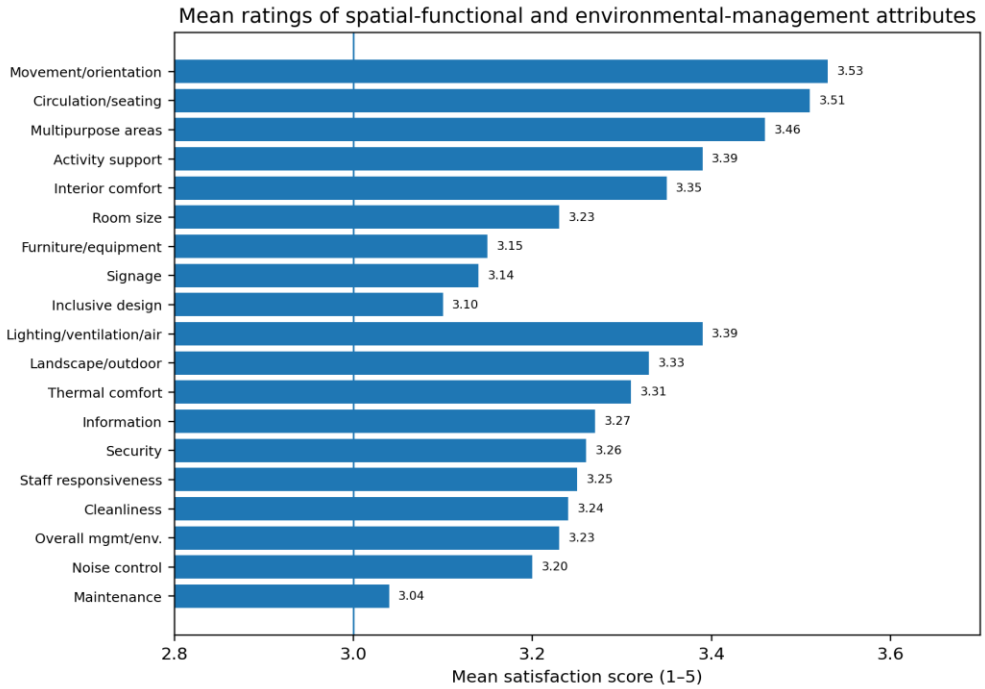


Figure 6: Satisfaction profile across measured spatial-functional and environmental-management attributes

Reported Relationship between User Characteristics and Satisfaction

The pooled analysis reported a weak negative association between an aggregated socio-economic/cultural measure and satisfaction ($r = -0.144$, $df = 148$, $p = 0.079$). The association was not statistically significant at the 0.05 level. Because the composition and coding of the aggregate index were not fully specified, this result is interpreted as an exploratory descriptive association, not as evidence that individual demographic characteristics have no relationship with satisfaction.

No causal or characteristic-specific conclusion should be derived from the reported aggregate correlation. Variables such as age, education and ethnicity are conceptually and metrically heterogeneous, and their combination into a single numerical predictor would require substantive justification and transparent scoring. The sample also has limited demographic heterogeneity. Future analysis should use separate, appropriately coded characteristics and prespecified hypotheses, with suitable diagnostics and confidence intervals.

User-Prioritised Improvements

The improvement item produced 147 valid responses and provides the clearest indication of where users wanted change. 69 respondents (46.9%) selected better maintenance of facilities, making it the clear top priority. A greener and more comfortable environment was selected by 40 respondents (27.2%), and improved accessibility by 18 (12.2%). More programmes and activities were selected by 11 respondents (7.5%), enhanced safety/security by eight (5.4%), and one respondent selected another improvement (0.7%).

The ranking is important because it converges with the satisfaction means. Maintenance was the lowest-rated environmental-management item and the most frequently requested improvement. Accessibility was also a major improvement priority and corresponds to the lowest spatial-functional mean for inclusive accommodation. Greener environmental quality was the second-ranked improvement even though landscape/outdoor environment was comparatively well rated; this suggests that respondents value outdoor comfort and want it strengthened rather than treating it as a dispensable amenity.

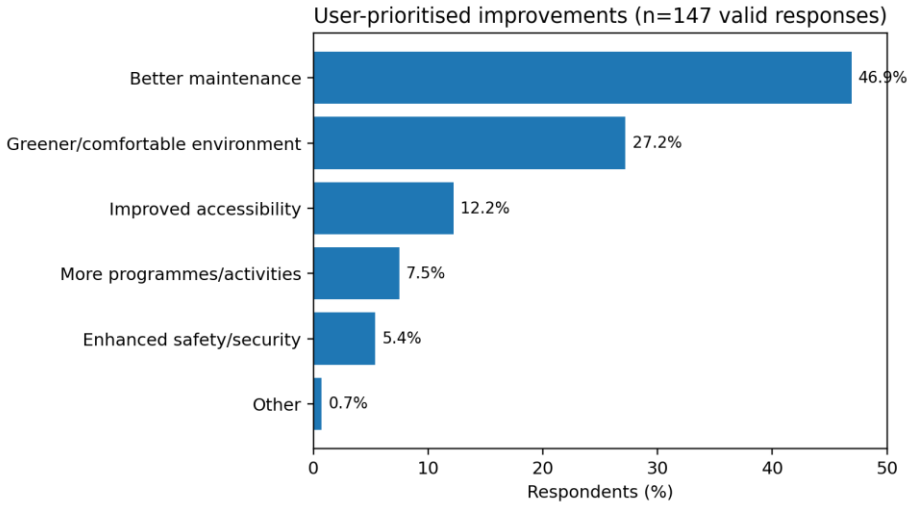


Figure 7: User-prioritised improvements to community centres

Discussion

Moderate Satisfaction Reflects Functional Adequacy Rather than Optimal Performance

The overall pattern is one of functional adequacy with identifiable weaknesses rather than either severe failure or strong satisfaction. Average item means of 3.32 for spatial-functional attributes and 3.25 for environmental-management attributes sit only moderately above the neutral point of the scale. This is consistent with a building stock in which basic community functions are being delivered but where supporting details, maintenance systems and inclusive features have not reached a consistently high standard. Makinde et al. (2024) reported a comparable pattern of moderate satisfaction in Nigerian government buildings, while Okopi (2023) found selective satisfaction with neighbourhood infrastructure alongside dissatisfaction with several services and open-space components. The broader implication is that Nigerian public-building performance may often be constrained less by complete absence of function than by uneven quality across systems and services.

This distinction matters for design intervention. Where a centre already supports movement, meetings and recreation reasonably well, replacement is not necessarily the first response. Targeted upgrades to signage, accessible routes, furniture, toilets, maintenance processes, acoustic treatment and landscape can potentially raise satisfaction without wholesale redevelopment. POE is useful precisely because it distinguishes between what is working and what needs improvement, helping clients direct limited resources more strategically.

Spatial Legibility and Circulation are Relative Strengths

Ease of movement/orientation and circulation/seating were the two strongest spatial-functional attributes. This suggests that respondents generally understood the basic organisation of the centres and could move through them without major difficulty. The finding aligns with POE evidence showing that spatial morphology and signage influence satisfaction in complex public environments (Zeng et al., 2024). It also supports Vischer's (2008) argument that environmental fit includes reduction of unnecessary functional effort: a building that is easy to navigate imposes less cognitive and physical burden on users.

The four-case architectural comparison helps clarify why circulation requires attention even when pooled survey ratings are relatively favourable. Firstenburg illustrates clearly demarcated circulation and visually linked activity spaces, while the Kola Daisi Civic Centre appraisal identifies possible crowding at large events. These are qualitative case observations, not site-specific explanations of the pooled questionnaire scores. Future studies should distinguish routine visits from peak-event conditions and associate individual respondents with specific facilities.

The relatively lower signage mean also shows that legibility cannot be inferred solely from plan configuration. Users may find general movement easy because of visibility, familiarity or staff assistance while still judging formal signage as inadequate. Given that 84.7% of the sample used the centres only occasionally, clear signage is particularly important. Occasional visitors cannot be expected to develop the spatial memory of regular users.

Multipurpose Use is Valuable, but Flexibility Requires Support Systems

The relatively high rating for multipurpose areas confirms the basic rationale of community centres as flexible social infrastructure. Meetings and recreation accounted for more than three quarters of stated primary uses, while education, training and religious activity added further programme diversity. A successful centre must therefore accommodate different group sizes, furniture arrangements, acoustic conditions and service requirements. McShane and Coffey's (2022) understanding of community hubs

as multi-service critical infrastructure reinforces this need for adaptability.

However, lower ratings for room size and furniture/equipment indicate that respondents distinguish between the availability of multipurpose space and the practical support required for diverse programmes. A large hall may be inconvenient when seating, movable equipment, storage or room subdivisions are inadequate. The Firstenburg precedent offers examples of integrated specialised and multipurpose rooms, whereas the Kola Daisi case demonstrates the strengths and potential peak-use pressures of extensive civic event spaces. Designing a hierarchy of adaptable spaces may thus be preferable to reliance on a single oversized hall.

Flexibility also has a management dimension. Booking systems, furniture storage, setup time, cleaning schedules and conflict between simultaneous activities determine whether adaptable spaces actually work in practice. This is one reason the conceptual framework links spatial-functional performance with management rather than treating them as independent.

Inclusive Access is the Clearest Spatial Weakness

Accommodation of people with special needs had the lowest spatial-functional mean (3.10), and improved accessibility was the third most common improvement priority. These findings are consistent with the architectural case studies: Mapo Hall's elevated position and lack of ramps/lifts create obvious barriers, while the Kola Daisi Civic Centre was also appraised as insufficiently accommodating physically challenged users. The result is therefore not an isolated questionnaire anomaly but part of a broader cross-case pattern.

The finding aligns closely with Adewale and Odewumi (2024), who found that selected Lagos community centres demonstrated some inclusive strategies but still required more comprehensive adoption. Inclusive architecture should begin at site planning and continue through entrances, internal circulation, toilets, seating, signage, emergency evacuation and information systems. Retrofitting isolated ramps after completion is not equivalent to designing an uninterrupted accessible journey from arrival to participation.

The social-infrastructure perspective makes this issue more consequential. A community centre that excludes users through stairs, narrow routes, inaccessible toilets or unclear information weakens the very civic inclusiveness it is intended to provide. For new projects, universal design should be embedded in the brief, procurement criteria and design review. For older facilities such as Mapo Hall, accessibility upgrades must be reconciled sensitively with heritage value but should not be deferred indefinitely on the basis of historical character.

Environmental Comfort is Acceptable, but Tropical Performance should be Measured more Rigorously

Lighting, ventilation and air quality received the highest environmental-management mean, while thermal comfort was also above the domain average. The descriptive Mapo Hall appraisal identifies high ceilings and substantial openings as plausible passive-comfort features; Kola Daisi Civic Centre is described as relying more on mechanical cooling during events. These differences illustrate alternative architectural strategies but cannot be linked to individual survey responses because respondents were not identified by site. The study does not report measurements of temperature, humidity, air speed, illuminance, carbon dioxide or noise; results therefore concern perceived, not instrumentally verified, indoor environmental quality.

Recent Nigerian research cautions against assuming that design intention guarantees comfort. Muhammad et al. (2025) found that thermal-comfort models and actual occupant responses diverged in

Abuja office buildings, with implications for both satisfaction and energy use. Owolabi et al. (2024) similarly demonstrate the importance of user perceptions of indoor air quality. The present study did not measure temperature, humidity, air speed, illuminance, CO2 or acoustic levels, so the results represent perceived IEQ rather than measured physical performance. A stronger future POE would integrate both forms of evidence.

This combined approach is important for community centres because occupancy density can change rapidly. A naturally ventilated multipurpose hall may be comfortable when half full and uncomfortable during a large ceremony. Objective monitoring during different event types would help distinguish persistent design problems from occupancy-related peaks and could guide hybrid ventilation or adaptive control strategies.

Acoustics and Information Quality Deserve Greater Design Attention

Noise control was among the weaker environmental-management attributes. This finding is plausible in multifunctional buildings where simultaneous activities, hard finishes and large-volume halls can produce reverberation and sound transfer. Oluwatayo and Adele (2024) found that specific acoustic strategies influenced satisfaction in Lagos convention centres, including absorptive and insulating materials and noise-buffering interventions. Community centres should therefore incorporate basic acoustic zoning and treatment during design rather than relying solely on sound systems to overcome poor room acoustics.

Information and communication received a moderate mean of 3.27, while signage in the spatial domain was lower at 3.14. Together, these results suggest that information performance is neither a major strength nor an extreme failure, but an improvement opportunity. Information in a community centre operates at several scales: external visibility, entrance identity, directional signage, programme notices, emergency information and digital communication. Coordinating these systems can improve both wayfinding and participation.

Maintenance is the Strongest and most Consistent Improvement Signal

Maintenance is the most decisive result in the article because two independent indicators converge on the same conclusion. It was the lowest-rated environmental-management attribute (M=3.04) and the first improvement choice of 46.9% of valid respondents. When a low satisfaction score and an explicit user priority align, the evidence for intervention is stronger than either indicator alone. The result also fits the visible challenges of older local case studies, where ageing infrastructure, limited safety systems and basic services can reduce performance over time.

The implication is that community-centre quality cannot be protected through architecture alone. Maintenance responsibilities, budgets, inspection cycles and defect-response systems must be defined from the outset. High-tech systems can improve efficiency and comfort but may fail rapidly if parts, technical expertise or budgets are unavailable. Conversely, low-tech passive strategies can be robust but still require maintenance of windows, roofs, drainage, finishes, furniture and landscape. Maintainability should therefore be treated as a design criterion that evaluates how easily building components can be inspected, repaired and replaced within local operational capacity.

The result also strengthens the case for repeated POE. A one-time evaluation identifies current weaknesses, but maintenance performance is dynamic. Annual or biennial user feedback, combined with maintenance records, could help facility managers identify recurring defects, compare changes after interventions and prioritise budgets based on user impact. This turns POE from an academic exercise into an operational management tool.

Landscape and Outdoor Comfort are Strategic Social Infrastructure

A greener and more comfortable environment was the second most common improvement priority, selected by 27.2% of respondents. At first glance this may appear inconsistent with landscape/outdoor environment being the second-highest environmental-management mean. A more useful interpretation is that users already recognise the value of outdoor quality and want more of it. Positive experience can generate higher expectations rather than eliminating demand for improvement.

This interpretation is consistent with Adedayo et al. (2023), who show that community open space can facilitate social interaction across diverse groups, and with Ogunleye et al. (2025), whose user-centred youth-centre research reported preferences for shaded green outdoor areas. In hot Nigerian climates, landscape can support comfort through shade, evapotranspiration, wind modification and reduced radiant heat, while also creating informal spaces for waiting, conversation and overflow activities. Such benefits make landscape a performance component rather than an aesthetic afterthought.

Contribution to Knowledge and Practice

The study makes three contributions. Empirically, it adds user-satisfaction evidence from Nigerian community centres to a POE literature that is still dominated locally by housing, offices and specialised public buildings. The combined spatial-functional and environmental-management profile shows that general movement and multipurpose use can perform moderately well even when inclusive access, signage, furniture and maintenance remain weak. The strong maintenance signal is particularly useful because it is supported by both mean ranking and direct improvement preference.

Conceptually, the article integrates POE with a social-infrastructure perspective. Community-centre satisfaction is interpreted not simply as comfort within a building but as the occupied performance of infrastructure intended to enable participation, belonging, services and collective activity. This perspective clarifies why access, information, landscape and maintenance are as important as room provision. The analytical framework also separates spatial-functional, environmental and management domains while recognising their interaction.

Practically, the research translates results into a design-management cycle that can be applied to new and existing centres: user-needs assessment, inclusive and legible spatial planning, climate-responsive environmental design, maintainability planning, commissioning, and repeated POE. The approach is especially relevant to civic and non-profit clients whose facilities must deliver long-term social value under constrained operating budgets.

Conclusion

This cross-sectional post-occupancy survey included 150 community-centre users, with 75 respondents recruited at each of two Ibadan sites—Mapo Hall and Kola Daisi Ibadan Civic Centre. The pooled responses indicate moderately favourable perceptions of spatial-functional performance: movement, circulation and multipurpose use were rated more positively than inclusion, signage and furniture. The separate four-case architectural comparison offers interpretive examples of contrasting design and operational strategies, but does not constitute a statistical comparison of survey satisfaction by building.

Environmental-management attributes likewise attracted moderate scores. Maintenance had the lowest mean and was selected most frequently as the highest-priority improvement, followed by greener and more comfortable environments and improved accessibility. These findings favour targeted improvements to maintenance systems, accessible circulation, wayfinding, adaptable facilities and landscape comfort over assuming that a generally functional building is necessarily inclusive or well managed.

The weak and non-significant pooled demographic correlation should not be interpreted as evidence of equivalence across demographic groups, given the limited documentation of the aggregate measure and the sample composition. Generalisability is further constrained by purposive sampling, the absence of site-specific item results and the lack of direct environmental measurements. Two item standard deviations could not be reported reliably. Future studies should retain site-specific data, describe ethical procedures and combine repeated user surveys with measurable physical performance indicators.

Future evaluations should retain respondent-to-site identifiers to permit valid centre-level comparison and document recruitment dates and participation rates. Replicable field-observation checklists and, where practicable, simultaneous environmental measurements would strengthen interpretation. For commissioners and operators, periodic user feedback linked to maintenance records and inclusive-design audits can improve community-centre performance throughout the building life cycle.

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