

Mobility Impaired Accessibility as a Measure of Inclusive Design in Faculty Buildings: A Case Study of the University of Ibadan

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Abstract: Inclusive design is widely regarded as an important indicator of how effectively institutional buildings respond to the needs of diverse users, particularly persons with mobility impairments. Despite the enactment of the Discrimination Against Persons with Disabilities (Prohibition) Act, 2018, accessibility challenges remain visible in many public educational facilities in Nigeria. This study assesses the level of inclusive design implementation in selected faculty buildings at the University of Ibadan, focusing on mobility-impaired accessibility. A field-based assessment approach was adopted, involving physical accessibility audits, direct measurement of building elements, photographic documentation, and observation of user movement patterns. Assessed elements included ramps, entrances, circulation spaces, staircases, sanitary facilities, external pathways, and parking areas. The data were evaluated against established accessibility standards to determine compliance and identify deficiencies. Findings reveal inconsistent provision of accessibility features, including non-compliant ramps, inadequate circulation clearances, and limited accessible sanitary conveniences. The study recommends systematic retrofitting, stronger regulatory enforcement, and early integration of inclusive design principles to achieve equitable access. These measures are essential for strengthening institutional commitment to inclusive education and ensuring independent participation of students, staff, and visitors across campuses nationwide when consistently implemented.

Keywords: Inclusive Design; Mobility Impairment; University Buildings; Disability Inclusion; Built Environment; Nigeria.

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I. INTRODUCTION

Inclusive design has become a central component of contemporary architectural practice, especially within higher education environments where diverse categories of users interact with campus facilities daily. The principle of inclusive design advocates for buildings and spaces that enable equitable access, autonomy, safety, and dignity for all users and persons with disabilities, older adults, individuals with temporary impairments, and those with sensory or cognitive limitations (Steinfeld & Maisel, 2012). International frameworks such as the United Nations Convention on the Rights of Persons with Disabilities (UN, 2006) and national accessibility policies continue to emphasize the need for barrier-free environments that support full participation in public life.

In Nigeria, the Discrimination Against Persons with Disabilities (Prohibition) Act of 2018 establishes legal

requirements compelling public institutions, including universities, to provide accessible facilities within a multi-year transition period. However, practical implementation of these provisions remains inconsistent across the country (Adeniran & Abiodun, 2021). Research shows that many Nigerian university buildings exhibit design shortcomings such as inadequate ramps, inaccessible sanitary facilities, lack of tactile indicators, poor signage systems, and limited circulation spaces (Oduwaye & Lawanson, 2017; Adebisi & Oke, 2020).

The University of Ibadan, being Nigeria's premier institution, provides a unique context for examining the implementation of inclusive design principles because its faculty buildings were developed across different historical periods and architectural regimes. While some newer facilities reflect improved design standards, others predate accessibility legislation and continue to pose challenges for users with diverse needs. Assessing the university's

compliance with established inclusive design guidelines is essential for understanding existing gaps and proposing context-appropriate improvements. This study, therefore, evaluates selected faculty buildings at the University of Ibadan to determine the extent to which inclusive design principles have been integrated into their planning, construction, and everyday use.

➤ *Alignment with Sustainable Development Goals (SDGs)*

Inclusive architecture directly supports several United Nations Sustainable Development Goals (SDGs). It advances SDG 10 (Reduced Inequalities) by removing barriers for marginalized groups, SDG 11 (Sustainable Cities and Communities) by fostering resilient and inclusive urban environments, SDG 4 (Quality Education) by ensuring equitable access to learning spaces, and SDG 9 (Industry, Innovation, and Infrastructure) by promoting universally designed infrastructure. Collectively, these goals underscore the role of inclusive design in building sustainable, equitable societies (Ekhaese & Oyelude, 2025).

➤ *Problem Statement*

Although inclusive design is widely recognized as a critical component of a functional and equitable learning environment, its implementation in Nigerian universities remains inadequate. Previous studies have documented numerous accessibility challenges in public buildings across the country, including steep circulation routes, absence of tactile surfaces, inaccessible toilet facilities, and poorly designed ramps (Adeniran & Abiodun, 2021; Adedayo & Bello, 2022). Many faculty buildings at the University of Ibadan, particularly those built before the Disability Act of 2018, still reflect outdated architectural standards that do not adequately support the needs of persons with disabilities.

Retrofitting efforts within public institutions have also been largely inconsistent and selective, thereby limiting the ability of students and staff with disabilities to navigate the campus independently (Oduwaye & Lawanson, 2017). The lack of systematic accessibility assessments further complicates planning and policy formulation, making it difficult to measure compliance with national and international accessibility guidelines such as ISO 21542 (ISO, 2011) and the Nigerian National Building Code (2006). There is therefore a need for an empirical evaluation of the implementation of inclusive design principles in faculty buildings at the University of Ibadan to provide evidence-based insights for upgrading existing facilities and guiding future development.

➤ *Aim*

To assess the implementation of inclusive design principles in selected faculty buildings at the University of Ibadan.

➤ *Objectives*

- To examine the existing physical accessibility features provided in selected faculty buildings

- To evaluate the extent to which these buildings comply with established inclusive design standards and relevant national accessibility guidelines (BSI, 2010; ISO, 2011).
- To identify barriers and design limitations that hinder independent and equitable use of the buildings by persons with disabilities and other user groups.
- To propose recommendations for enhancing inclusive design integration in both existing and future university building projects.

II. LITERATURE REVIEW

➤ *Historical Evolution of Inclusive Architecture*

The evolution of inclusive architecture spans nearly a century. Originally rooted in the barrier-free design movements of the 1950s in the USA, Europe, and Japan, it sought to remove physical obstacles for returning veterans and ageing populations. By the 1970s, the movement expanded into accessible and integrated design, aligning with broader social movements advocating equal rights (“Inclusive Design,” 2025). Nigeria was not isolated from these global shifts. After adopting the UN Standard Rules on disability inclusion, it introduced the Disability Act of 1993 to support rights and opportunities for people with disabilities.

However, Oyetola et al. (2015) observed that Nigerians with disabilities remained severely marginalized, reflecting weaknesses in policy implementation. The Nigerian National Building Code (NBC, 2006) attempted to incorporate accessibility provisions. However, as the 2025 JACCES study shows, these provisions are insufficient and lack measurable specifications such as ramp gradients, door widths, corridor dimensions, and signage requirements. (Sholanke & Adisa, 2025). This has led to inconsistent interpretation and weak implementation of inclusive design across Nigerian built environments, including university campuses.

➤ *Theoretical Background*

Mobility impairment refers to limitations in a person’s ability to move and navigate spaces, often due to physical or neurological conditions, making them particularly sensitive to architectural barriers in public buildings (Benkechkache & Kaghouché, 2023). Physical accessibility is the ease of movement and use of the built environment by all users and is framed as a human right and legal requirement in higher education settings (Maldonado-Garcés et al., 2025; Benkechkache & Kaghouché, 2023). Inclusive design aims to ensure that environments are usable by as many people as possible, enhancing inclusion, diversity, equity, and accessibility in buildings and their post-occupancy phases (Zallio & Clarkson, 2023).

Universal design (UD) is a related design ideology that seeks to accommodate the accessibility and usability needs of everyone regardless of their ability or disability (Sholanke, Adeboye, & Alagbe, 2019). In higher education, inaccessible academic buildings can deprive mobility-impaired students of opportunities to obtain education and fully participate in campus life (Sholanke et

al., 2019). A recent scoping review argues that accessibility research must be explicitly grounded in social justice and equity, as systemic barriers and discriminatory practices continue to marginalize people with mobility disabilities in access to public buildings (Mohapatra et al., 2024).

➤ *Global Literature on Mobility-Impaired Accessibility*

Globally, research on public buildings and campuses consistently documents physical barriers such as missing or non-compliant ramps, stairs without alternatives, inaccessible toilets, and inadequate wayfinding. In Kenya, many public buildings remain largely inaccessible to persons with mobility challenges due to non-compliant ramps and inadequate guidance on inclusive design (Arthur, 2016).

In higher education, an Ecuadorian campus audit using national and international regulations found that the university moderately meets the accessibility parameters, with nearly half the evaluated elements only barely accessible (Maldonado-Garcés et al., 2025). In Jordan, a multi-method study based on an ADA-derived checklist showed that public universities had not applied all required design factors, and that satisfaction of physically disabled students was strongly associated with the quality and availability of parking, entrances, corridors, bathrooms, signage, ramps, elevators, and stairs (Alhusban & Almshaqbeh, 2024).

Systematic and scoping reviews extend this picture. A review of inclusive public open spaces highlights that integrating inclusive design, accessibility standards, and UD principles requires robust enforcement, contextual adjustment, and stakeholder involvement, particularly in the Global South (Gupta et al., 2025). The scoping review on accessibility to public buildings stresses that research has often neglected low and middle-income countries (LMIC) contexts and calls for a Ten-step approach to embed social justice and equity in accessibility research (Mohapatra et al., 2024).

• *Overall Trends Show:*

- ✓ Widespread partial or non-compliance with accessibility standards.
- ✓ Growing use of standards-based audits and mixed-methods approaches.
- ✓ Increasing attention to user perceptions and rights-based framings.

➤ *Higher Education Context*

Several studies specifically target universities and colleges. In Ecuador, a detailed building-level assessment based on an ad hoc instrument derived from national and international regulations both measures campus accessibility and proposes an assessment model that can be replicated elsewhere (Maldonado-Garcés et al., 2025). In Jordan, researchers combined literature review, on-site observation, ADA-based comparative analysis, and questionnaires to evaluate design factors and disabled students' satisfaction with the campus environment (Alhusban & Almshaqbeh,

2024). User-experience studies emphasize the lived consequences of inaccessibility.

A Ghanaian case study of a student with rare mobility challenges concluded that relying on individual discretion to address unique accessibility needs is inappropriate and called for institutionalized reasonable accommodation (Tudzi, Bugri, & Danso, 2020). In Algeria, spatial syntax analysis alongside surveys and observation showed that architectural design directly shapes the social behavior and space appropriation of people with reduced mobility in a faculty of architecture, and that current environments hinder integration because of architectural and technical barriers (Benkechache & Kaghouché, 2023). Common challenges across campuses include inaccessible entrances and lecture halls, non-compliant ramps and stairs, inadequate signage and wayfinding, and a lack of accessible sanitary facilities (Ansah & Bamfo-Agyei, 2014; Alhusban & Almshaqbeh, 2024).

➤ *African and Nigerian Tertiary Context*

African studies reveal structural and regulatory constraints in delivering inclusive university environments. In Ghana's University of Cape Coast, an exploratory study using literature review, observation, interviews, and surveys found that campus buildings were not totally disability-friendly, with entrances, ramps, staircases, signage, and wheelchair spaces often inadequate or absent (Ansah & Bamfo-Agyei, 2014). The Ghanaian intrinsic case study further underlines that ad-hoc responses to disability, rather than institutional policies, undermine rights to accessibility and inclusion (Tudzi et al., 2020).

In Nigeria, several building-level and multi-site studies focus explicitly on UD and inclusive design in academic buildings. Sholanke et al. investigated multiple universities and found that barriers to UD compliance included a lack of equitable accessibility provisions, inappropriate access provisions, nonflexible usability provisions, recommending phased renovation and UD-compliant maintenance policies (Sholanke et al., 2019). A companion paper emphasizes that inaccessible academic environments can exclude mobility-impaired people from education and calls for retrofitting structures with inclusive design features.

Faculty-building case studies show similar patterns. At Federal Polytechnic Mubi, an observation-based checklist revealed that only two of seven UD principles were applied, leaving the building "not accessible to all users" and highlighting the need to consider all categories of users in design (Mohammed, Haruna, & Lawal, 2021). At Abubakar Tafawa Balewa University, another faculty-building study similarly found that UD principles were "not adequately applied" and argued that UD must be integrated from the design stage to make buildings accessible to all (Aliyu, Bashir, & Hussaini, 2023).

High-rise academic buildings raise additional concerns. At Covenant University, vertical circulation components (ramps, staircases, lifts) exhibited inconsistencies with UD strategies, leading to recommendations for retrofitting and

revised guidelines to promote social inclusion in academic environments (Sholanke et al., 2020).

More broadly, surveys of institutional buildings in Nigerian cities indicate that public educational facilities typically lack ramps to upper floors and often have no elevators, leaving upper levels inaccessible to people with mobility challenges (Arthur, 2016). Regulatory frameworks such as the Nigerian Building Code and disability rights legislation are frequently referenced, but studies point to weak enforcement and limited client awareness of inclusive design benefits (Zallio & Clarkson, 2023; Maldonado-Garcés et al., 2025).

➤ *Institutional Policy Context: University of Ibadan*

Literature on inclusive design emphasizes that effective accessibility in universities requires institutional policies that translate inclusion principles into the physical built environment. Where such policies lack architectural guidance, inclusive outcomes are often inconsistent. At the University of Ibadan (UI), institutional commitment to inclusion is reflected in documents such as the University of Ibadan Gender Policy, which promotes fairness, dignity, non-discrimination, and equal participation within the university community (University of Ibadan, 2025).

However, the policy focuses largely on social and administrative inclusion, with little reference to architectural accessibility or universal design standards for faculty buildings and circulation systems. This absence of clear spatial and architectural guidelines suggests a gap between institutional inclusion goals and their physical implementation, reinforcing the need for building-level assessments of mobility-impaired accessibility within UI faculty buildings.

➤ *Synthesis and Research Gaps*

Across global, African, and Nigerian studies, several consistent findings emerge:

- Mobility-impaired accessibility remains partial and inconsistent in many public and university buildings, even where regulations exist (Maldonado-Garcés et al., 2025; Sholanke et al., 2020).
- Building-level audits grounded in UD principles and standards reveal systematic neglect of entrances, vertical circulation, toilets, signage and wayfinding, and user maneuvering space (Mohammed et al., 2021; Ansah & Bamfo-Agyei, 2014).
- User-centered studies show that these barriers translate into reduced participation, dependence on others, psychological strain, and constrained educational choices (Tudzi et al., 2020; Benkechache & Kaghouché, 2023).
- There is growing recognition that accessibility is not only a technical issue but a social-justice and equity concern requiring institutional and policy change (Mohapatra et al., 2024).

However, several important gaps justify a focused case study of the University of Ibadan faculty buildings:

- Limited Nigerian university-specific, faculty-level evidence: Existing Nigerian studies examine multiple universities or selected faculty buildings but do not cover the University of Ibadan, and there is little systematic, building-by-building evaluation of faculty complexes as indicators of inclusive design (Sholanke et al., 2019; Aliyu et al., 2023).
- Weak linkage between measurable accessibility and “inclusive design” as an evaluative construct: Most accessibility audits measure compliance but do not show how accessible buildings represent inclusive design or institutional inclusion.
- Under-representation of low and middle-income country (LMIC) university contexts in social-justice-oriented accessibility research: The scoping review on mobility disabilities notes poor representation from low- and middle-income countries, which can obscure distinctive obstacles in these settings (Mohapatra et al., 2024). A rigorous Ibadan case study would contribute context-specific data.
- Local policy and enforcement analysis: While regulations such as the Nigerian Building Code exist, detailed examination of how they are applied (or not) in specific faculty buildings is rare, and there is evidence of limited client and institutional awareness of inclusive design benefits (Zallio & Clarkson, 2023).

A case study of faculty buildings at the University of Ibadan based on UD-informed physical audits and analysis of institutional policy documents can help address key empirical and conceptual gaps, while providing a grounded assessment of inclusive design within a major Nigerian university.

III. METHODOLOGY

➤ *Research Design*

This study adopted a case study research design to evaluate mobility-impaired accessibility as a measure of inclusive design in selected University of Ibadan faculty buildings. A case study approach was considered most appropriate because the research is primarily qualitative in nature, supported by quantitative physical measurements, and focuses on evaluating the built environment rather than user perception.

➤ *Study Area*

The research was conducted at the University of Ibadan (UI), Nigeria, which comprises faculty buildings constructed over several decades. Specific faculty buildings were selected purposively based on high student traffic, multi-floor structures, and accessibility relevance.

• *Selected Faculties:*

- ✓ Faculty of Arts
- ✓ Faculty of Education
- ✓ Faculty of Social Science

➤ Data Collection Methods

Data was collected through a structured physical accessibility audit of the selected buildings. The audit checklist was derived from Universal Design principles, the Nigerian National Building Code (2006), and relevant international accessibility guidelines.

• Audit Parameters Included:

- ✓ Ramps (presence, slope, width, handrails)
- ✓ Entrances and door widths
- ✓ Corridors and circulation spaces
- ✓ Staircases and elevators
- ✓ Accessible toilets
- ✓ Signage and wayfinding
- ✓ External pathways, parking, and drop-off points

Measurements were taken using tape measures, photographs, and direct observations. The audit provided a quantitative assessment of mobility-impaired accessibility features.

IV. RESULTS AND DISCUSSION

A. Results

➤ Ramps

• Faculty of Social Sciences

Ramps were not provided at the main entrance of the Faculty of Social Sciences building. A secondary ramp within the Faculty of Social Sciences recorded a width of approximately 2000 mm. The vertical rise of the ramp was measured as 500 mm over a horizontal length of 2600 mm, resulting in an approximate slope of 1:5. No handrails were observed along the ramp edges.

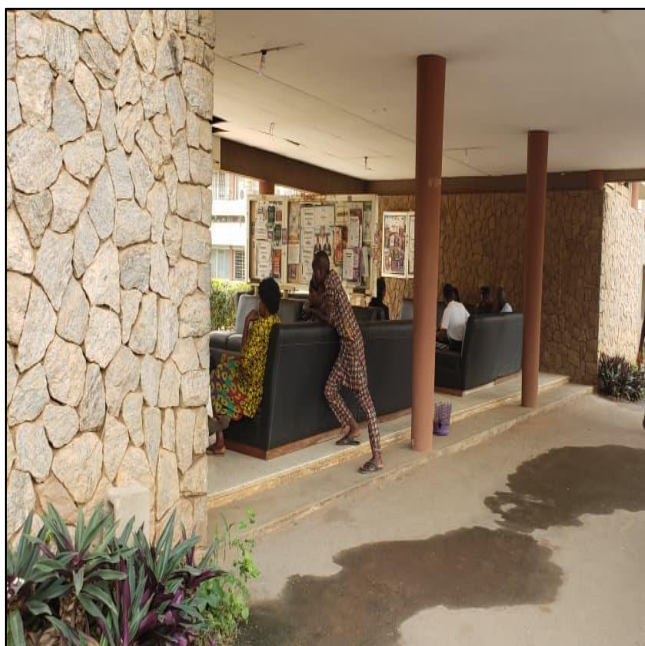


Fig 1 Faculty of Social Sciences Entrance Showing the Absence of a Ramp.
(Source: Field Survey, 2026).



Fig 2 Faculty of Social Sciences Secondary Ramp Showing Measured Width and Slope.
(Source: Field Survey, 2026).

• Faculty of Education

At the Faculty of Education, a ramp was provided at the main entrance with a measured width of approximately 1700 mm. The ramp recorded a vertical rise of about 1600 mm over a length of 8500 mm, resulting in an approximate slope of 1:5.3. Continuous handrails were provided along the ramp. A secondary ramp at the rear entrance of the Faculty of Education recorded a width of approximately 1670 mm. The ramp had a vertical rise of 770 mm over a length of 4700 mm, producing an approximate slope of 1:6. Handrails were not provided on this ramp.



Fig 3 Entrance Ramp at the Faculty of Education Showing Measured Width, Rise, and Length
(Source: Field Survey, 2026)



Fig 4 Faculty of Education Secondary Ramp Showing Measured Width and Slope.
(Source: Field Survey, 2026)



Fig 6 Faculty of Arts Secondary Ramp Showing Measured Width and Slope.
(Source: Field Survey, 2026).

- *Faculty of Arts*

Ramps were not provided at the main entrance of the Faculty of Arts building. Secondary ramps were available inside the Faculty: A secondary ramp measured approximately 1400 mm in width. The vertical rise was recorded as 1440 mm over a length of 3250 mm, producing an approximate slope of 1:2.3. No handrails were observed on the ramp at the time of the survey.

Another secondary ramp leading into a courtyard within the Faculty of Arts recorded a width of approximately 1650 mm. The ramp had a vertical rise of 1020 mm over a length of 20200 mm, producing an approximate slope of 1:20. Handrails were not provided on this ramp.



Fig 7 Faculty of Arts Secondary Ramp Showing Measured Width and Slope.
(Source: Field Survey, 2026).



Fig 5 Faculty of Arts Entrance Showing the Absence of a Ramp.
(Source: Field Survey, 2026).

➤ *Entrances and Door Widths*

- *Faculty of Social Sciences*

The Faculty of Social Sciences building recorded multiple entrance points. The main lecture theatre entrance door measured approximately 1800 mm in width, while a secondary entrance door measured about 1360 mm. While adequate door widths were observed, some entrance points were fitted with steps, requiring vertical negotiation at the point of entry.



Fig 8 Main Entrance Door to the Lecture Theatre at the Faculty of Social Sciences Showing Measured Door Width and Steps at Selected Entry Points.
(Source: Field Survey, 2026).

- *Faculty of Education*

At the Faculty of Education, the main lecture theatre entrance door measured approximately 1750 mm in width a secondary door was recorded at approximately 1400 mm.



Fig 9 Main Lecture Theatre Entrance Door at the Faculty of Education.
(Source: Field Survey, 2026).

- *Faculty of Arts*

The Faculty of Arts building featured a main entrance lobby with a measured width of approximately 2000 mm, with a similar width recorded for the stair lobby. The toilet door width was measured at approximately 820 mm. Despite the availability of wide lobby spaces, some entrance points were fitted with steps.



Fig 10 Main Entrance Lobby at the Faculty of Arts Showing Circulation Width.
(Source: Field Survey, 2026).

➤ *Corridors and Circulation Spaces*

- *Faculty of Social Sciences*

The internal corridors within the Faculty of Social Sciences building measured approximately 1800 mm in width. The corridors generally allowed for linear movement along major circulation routes. However, circulation continuity was occasionally interrupted at junctions and access points, requiring directional changes for movement between spaces.

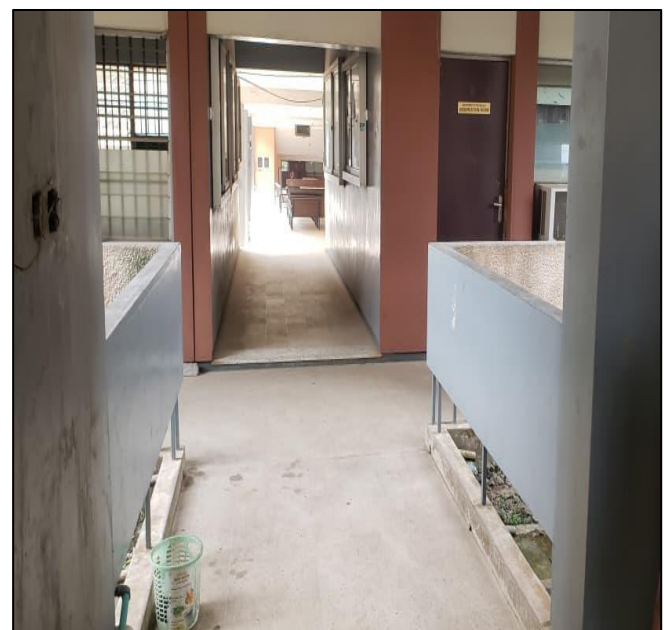


Fig 11 Internal Corridor at the Faculty of Social Sciences Showing Measured Width.
(Source: Field Survey, 2026).

- *Faculty of Education*

Corridors within the Faculty of Education building recorded an average width of approximately 1500 mm. The corridors connected major functional spaces such as lecture theatres and offices and provided direct internal circulation routes across the building.



- *Faculty of Arts*

The Faculty of Arts building featured internal corridors measuring approximately 2000 mm in width. These corridors functioned as central circulation spines, connecting lecture halls, staircases, and lobby spaces within the building.

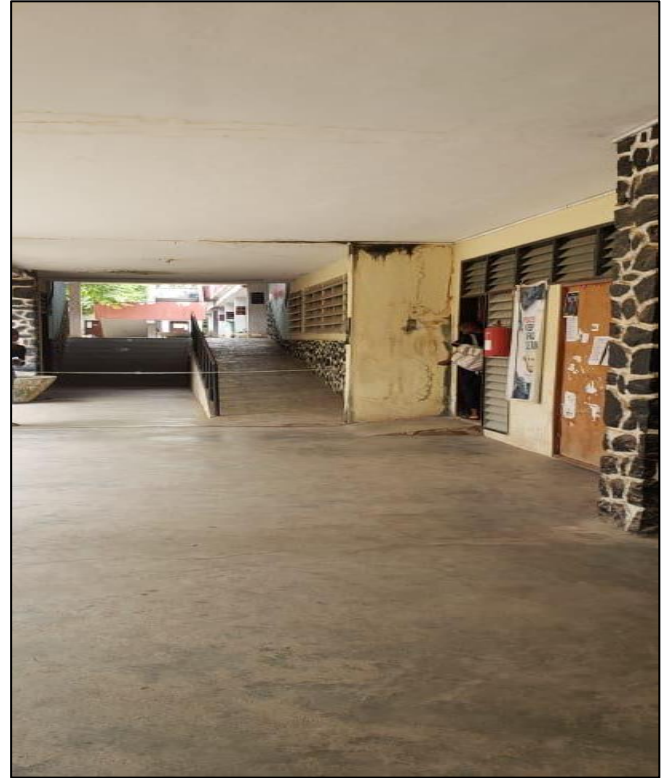


Fig 12 and 13 Internal Corridor at the Faculty of Education Showing Measured Circulation Width.
(Source: Field Survey, 2026).



Fig 14 and 15 Internal Corridor at the Faculty of Arts Showing Circulation Width.
(Source: Field Survey, 2026).

- *Staircases and Elevators*

✓ General Observation: No lifts or elevators were provided in any of the assessed faculty buildings. Vertical circulation across all buildings was achieved exclusively through staircases.

- *Faculty of Social Sciences*

Staircases served as the sole means of vertical circulation within the Faculty of Social Sciences building. Field measurements recorded an average stair tread of approximately 250 mm and a riser height of about 150 mm. The staircase width measured approximately 1500 mm. The building comprised three floors accessed exclusively through staircases.

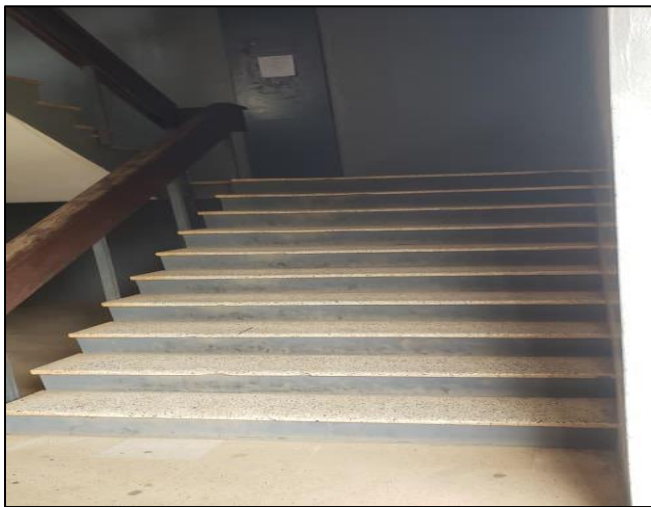


Fig 16 and 17 Main Staircase at the Faculty of Social Sciences Showing Tread, Riser, and Width Dimensions. (Source: Field Survey, 2026).

- *Faculty of Education*

At the Faculty of Education, staircases provided the only means of accessing upper floors. The staircase width was measured at approximately 1170 mm, with an average tread depth of about 280 mm and a riser height of approximately 150 mm.



Fig 18 and 19 Staircase at the Faculty of Education Showing Measured Tread and Riser Dimensions. (Source: Field Survey, 2026).

- *Faculty of Arts*

In the Faculty of Arts building, staircases were the sole vertical circulation elements. The stair width measured approximately 1660 mm, with an average tread depth of about 280 mm and a riser height of approximately 160 mm.



FIG 20 Staircase at the Faculty of Arts Showing Stair Width, Tread, and Riser Dimensions. (Source: Field Survey, 2026).

➤ Accessible Toilets

• Faculty of Social Sciences

No designated accessible toilet facilities were observed within the Faculty of Social Sciences building. All toilet spaces consisted of standard cubicles, with no provisions specifically identified for mobility-impaired users. Toilet facilities were accessed through a main entrance door measuring approximately 840 mm in width.

• Faculty of Education

Toilet facilities within the Faculty of Education building were accessed through a main entrance door measuring approximately 1180 mm in width, leading into a lobby space measuring about 850 mm wide. The internal toilet door measured approximately 700 mm in width. Despite the presence of these spaces, no designated accessible toilet cubicles or mobility-support fittings were observed.

• Faculty of Arts

In the Faculty of Arts building, toilet facilities were accessed through doors measuring approximately 870 mm in width. No designated accessible toilet cubicles or mobility-support features were observed within the toilet facilities.

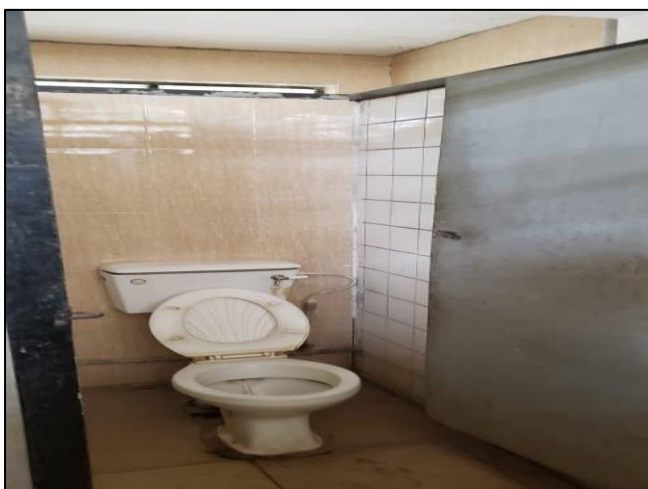


Fig 21 and 22 Toilet Cubicles at the Faculty of Education and the Faculty of Arts
(Source: Field Survey, 2026).

• Signage and Wayfinding

General Observation: Across all assessed faculty buildings, no accessible signage or wayfinding systems were observed. There were no tactile indicators, directional signs, or visual cues specifically designed to support navigation for mobility-impaired users within entrances, corridors, staircases, or external approaches.

➤ External Pathways and Parking

• Faculty of Social Sciences

External access to the Faculty of Social Sciences building was provided through paved walkways connecting surrounding campus routes. However, changes in level along access routes were primarily negotiated through steps. A designated drop-off point was observed close to the building entrance; no designated accessible parking spaces were observed in proximity to the building entrance.



Fig 23 Parking at the Faculty of Social Sciences Showing Drop-off Point.
(Source: Field Survey, 2026).

• Faculty of Education

The Faculty of Education building was approached via paved external walkways linking adjacent campus spaces. Ramps were provided at selected access points to manage level changes. However, no designated accessible parking spaces or marked drop-off zones for mobility-impaired users were observed during the field survey.



Fig 24 Parking at the Faculty of Education.
(Source: Field Survey, 2026).

- *Faculty of Arts*

External circulation around the Faculty of Arts building consisted of paved pathways connecting entrances to surrounding campus routes. Primary access routes included steps at selected entry points. No designated accessible parking spaces or formal drop-off areas for mobility-impaired users were observed.



Fig 25 Parking at the Faculty of Arts.
(Source: Field Survey, 2026).

Table 1 Presents a Comparative Summary of Key Mobility-Impaired Accessibility Features
Observed Across the Selected Faculty Buildings at the University of Ibadan.

Accessibility Parameters	Faculty of Arts	Faculty of Education	Faculty of Social Science
Ramps (presence, slope, width, handrails)	Ramp present; width = 1.4m slope = 1:2.3 handrails absent	Ramp present; width = 1.7m slope = 1:5.3 handrails present	Ramp present; width= 2m Slope = 1:5 handrails absent
Entrances and door widths	Lecture theatre door $\approx$ 1.57m toilet door 870 mm; some entrances fitted with steps	Lecture theatre door = 1400 mm toilet door 850 mm	Lecture theatre door = 1800 mm toilet door 840 mm; some entrances fitted with steps
Corridors and circulation spaces	Entrance lobby = 4000 mm; stair lobby = 2000 mm	Entrance lobby = 1500 mm; stair lobby = 2000 mm	Entrance lobby = 1800 mm; stair lobby = 2000 mm
Staircases and elevators	Stair width = 2000 mm; tread 300 mm; riser = 170 mm; no lift provided	Stair width = 1170 mm; tread 280 mm; riser = 150 mm; no lift provided	Stair width = 1660 mm; tread 280 mm; riser = 160 mm; no lift provided
Accessible toilets	No designated accessible toilet observed	No designated accessible toilet observed	No designated accessible toilet observed
Signage and wayfinding	No accessible signage or tactile indicators observed	No accessible signage or tactile indicators observed	No accessible signage or tactile indicators observed
External pathways, parking, and drop-off points	Paved pathways; steps at primary access points; no accessible parking or drop-off observed	Paved pathways; ramps at selected points; no accessible parking or drop-off observed	Paved pathways; steps along access routes; drop-off point provided; no accessible parking observed

B. Discussion

This study used Universal Design requirements from the Americans with Disabilities Act, UK Building Regulations, World Bank Technical Note on Accessibility (2022), and Nigeria's Persons with Disabilities (Accessibility) Regulation. It examined the inclusive design of certain faculty buildings at the University of Ibadan using its inclusion of people with mobility impairments as a measure of space for accessibility, rather than just allowing individuals to use facilities without disabilities due to physical limitations. The findings show that the use of inclusive design in the buildings studied is not consistent, is not sufficient, and is mostly limited by old design methods that focus on traditional approaches.

Ramps were present in some locations but failed to meet core performance and safety criteria. International standards focus on easy slopes (ideally 1:20; up to 1:12 for short sections), enough space to walk through, small platforms in between, safety barriers along the edges, and handrails that go all the way to help people move safely and use the space on their own. In the case study buildings, several ramps showed problems like very steep slopes, too small or missing landings, and improper ends at doorways

without flat platforms to rest on. Architecturally, this represents a structural form of exclusion embedded within the building typology, particularly in pre-legislation academic buildings. This condition continues to show that there are bigger problems when trying to update old buildings on campuses in poorer and middle-income areas.

Toilet access was not always available and often wasn't enough. Universal standards require adequate internal turning space, outward-opening doors, compliant grab rails, raised toilet seats, and reachable fittings to support independent and dignified use. Nigerian rules also require that each floor of multi-story public buildings have toilets that are easy to use. Where accessible toilets existed, they were often poorly maintained or inconveniently located, limiting their practical usability. This matches larger studies in college settings, where clean restrooms are often ignored in efforts to make welcoming spaces for everyone, even though they are very important for people to stay involved and active. Despite the presence of other barriers, external pathways and parking arrangements still present significant obstacles to inclusive movement. Universal Design principles and the World Bank framework emphasize the importance of creating a seamless, accessible path that

connects parking areas (independently designed buildings) and access points on the inside, such as in the case study buildings. These shortcomings demonstrate that accessibility needs to be addressed at the campus level, not just in individual buildings, but also within their context. Overall, the results show that inclusive design in the studied faculty buildings is largely done after the fact and in its individual components rather than as part of the main planning and building decisions; accessibility features appear to depend on what is specific to each project more than on a clear system matching universal design guidelines: this distinction reflects broader tensions between policy-level inclusion commitments and their spatial realization in urban contexts.

V. CONCLUSION AND RECOMMENDATION

➤ Conclusion

This study evaluated the implementation of inclusive design principles within selected faculty buildings at the University of Ibadan, specifically focusing on accessibility for mobility-impaired users. The assessment reveals that while inclusive design is recognized globally as a human right and a legal requirement under the Nigerian Discrimination Against Persons with Disabilities (Prohibition) Act of 2018, its practical application remains inconsistent across the campus.

The findings indicate that many faculty buildings, particularly those predating modern accessibility legislation, continue to exhibit significant design shortcomings. These barriers, ranging from non-compliant ramps and inaccessible sanitary facilities to inadequate signage, hinder the independence and dignity of students and staff with disabilities. Such physical limitations not only contravene national building codes but also restrict equitable access to quality education, thereby impacting the university's alignment with Sustainable Development Goals 4 and 10.

➤ Recommendations

Based on the findings of this study, the following recommendations are proposed to improve mobility-impaired accessibility and inclusive design within faculty buildings at the University of Ibadan.

- **Retrofitting of Existing Buildings:** Existing faculty buildings, especially those constructed before 2018, should be systematically retrofitted to improve accessibility. Priority should be given to entrances, ramps, vertical circulation, and sanitary facilities.
- **Provision of Vertical Accessibility:** Lifts or alternative vertical accessibility solutions should be installed in multi-story faculty buildings to ensure access to upper floors.
- **Improvement of Ramp Design:** All ramps should be redesigned to meet recommended standards for slope, width, surface finish, and handrail provision.
- **Provision of Accessible Toilets:** Each faculty building should include at least one fully accessible toilet with adequate space and mobility-support fittings.

- **Introduction of Accessible Signage:** Clear and accessible signage and wayfinding systems should be provided to support independent navigation within faculty buildings.
- **Improvement of External Access:** External pathways should be step-free and continuous, with designated accessible parking spaces and clearly marked drop-off points close to building entrances.
- **Regular Accessibility Audits:** The university should conduct periodic accessibility audits using recognized national and international standards.
- **Inclusive Design in Future Projects:** Inclusive design principles should be mandatory in all new construction and major renovation projects.
- **Policy Development and Training:** Institutional policies should explicitly address architectural accessibility, supported by training for designers and facility managers.

Ultimately, fostering an inclusive built environment is a matter of social justice and equity. By addressing these architectural barriers, the University of Ibadan can lead by example as Nigeria's premier institution, ensuring that its physical infrastructure supports the full participation of all members of the academic community.

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