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Investigating Compliance With Wheel Chair Accesibility Standards Within The Premises Of Federal Polytechnic Ilaro, Ogun State, Nigeria.

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ABSTRACT

An examination of academic facilitieswithin Nigerian public spaces like tertiary institutions revealed disparities in physical accessibility for individuals with impairments. The research is particularly aimed at investigating the compliance of academic facilities with wheel chair accessibility standards within Federal Polytechnic Ilaro. This is with the view to inform strategies for creating more equitable and environmentally conscious academicmilieu. To achieve this, the investigation sought to identify all structures within the campus, establish benchmark standards for accessibility based on pertinent legislation, and assess the degree of conformity among existing buildings. A total of 147 structures were scrutinized, with the exception of Gbokoto residential area. Supplementary data was gathered from applicable statutory documents. The results indicate that the majority of structures erected prior to 2018 fail to satisfy current accessibility standards. Consequently, the research advises the institution to incorporate tailored accessibility features into its existing infrastructure as a priority.

KEYWORDS Accessibility, Facilities, Impairment, Inclusion, People, Standards, Wheel chair.

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I. INTRODUCTION

The target 4.5 of the fourth sustainable development goal is essentially about eliminating gender disparities in education and ensuring equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations. This has made it imperative for institutions inclined towards the delivery of technical and vocational educational training to mainstream practices that promote inclusion in a manner that ensures delivery meets the needs of all learners, regardless of their social background, gender, level of achievement, ethnicity, and disability (UNESCO, 2019). Disadvantaged people suffering a disability or the other, among other barriers, are faced with the challenge of accessing educational facilities, as facilities do not consider their needs in conceptualization and implementation (Hamzat &Dada 2005). This Social exclusion of people with disabilities, on account of access, is a reality in most countries of the world (Ken, 2016; Lontsi & Wandjie, 2022). People suffering disability are talented and have immense potential for competence and upward mobility. However, the physical environment and the extent of their integration into the society determines their level of progress (Izobo-Martins& Azoom, 2019; United Nations, 2006).

Accessibility involves the offering of an unhindered access to entry points to the spaces within building where users, including individuals with disabilities, can seamlessly navigate and carry out required activities and functions. Accessibility could also be contextualized as relating with to unhindered movements within the immediate vicinity of buildings, on local roads and paths and within open spaces and recreational areas by all manner of users, including people living with disability (Adelaja, 2017). Inaccessibility, especially in public facilities like tertiary institutions, can obviously act as a barrier in the social mobility of disadvantaged people. This barrier can constrain the actualization of global goals and national plans that are aimed at promoting inclusionin the education and economic empowerment of the community of physically challenged persons. The human rights dimension to eliminating access barriers for people living with disability have been well

addressed. Section 34 of the Constitution of the Federal Republic of Nigeria provides generally for the dignity of human, including persons with disabilities. Essentially, there is the Discrimination against Persons with Disability passed into law in the year 2018, which prohibits discrimination on the basis of disability and imposes sanctions including fines and prison sentences on those who contravene it. The law, among others, provides a five years transitional period within which existing public buildings structures are to be modified to be accessible to and usable by persons with disabilities, including those on wheelchair. It also provides that buildings should conform with the building code before being approved by planning authorities (Adewale, 2022).However, despite the availability of a law that favours the integration of disability needs in public buildings, most public buildings, including those in educational institutions, are still not fully disability compliant.

The aim of this study is to investigate the level of compliance with access requirements for people living with disabilities in buildings located within The Federal Polytechnic Ilaro, with the view to offer recommendations on more inclusive and sustainable developments within the study area. The objectives of the study are to identify all the buildings within the academic area of the study area; determine the access requirements for people living with disabilities, as established by relevant legal provisions; and assess the level of compliance of the buildings located within the Federal Polytechnic Ilaro with the legal access requirements for people living with disabilities.

II. METHODOLOGY

The Federal Polytechnic Ilaro is a Polytechnic based in Ogun State, Southwestern Nigeria. The institution was established by law on July 25, 1979 and opened her gates to the public on November 15, 1979. The Polytechnic has since then acquired the reputation of a quintessential institution educating and training students in 5 Five school or faculties. The Federal Polytechnic Ilaro is geographically situated in Ilaro, Yewa South Local Government Area of Ogun State. It is located between latitude 6° 53' 0" North, 3° 1' 0" East of the meridian.

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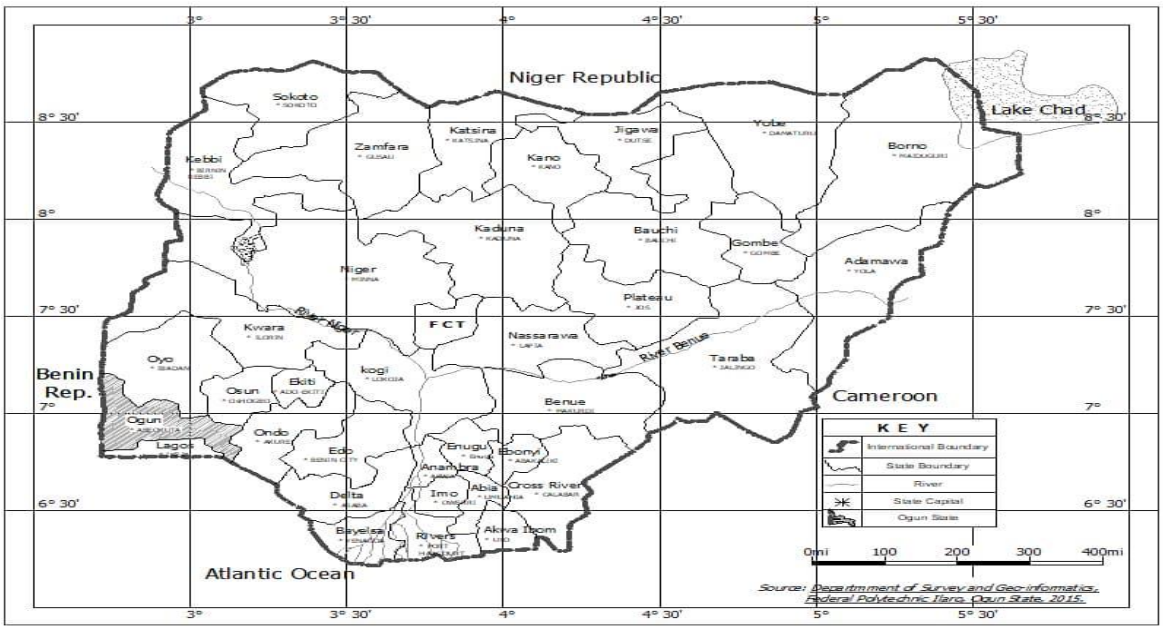
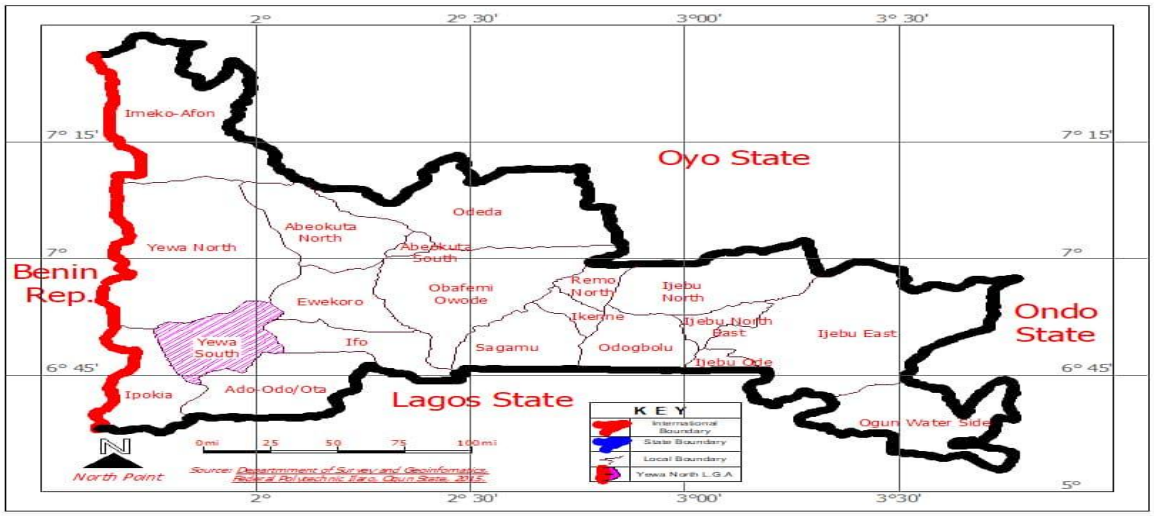
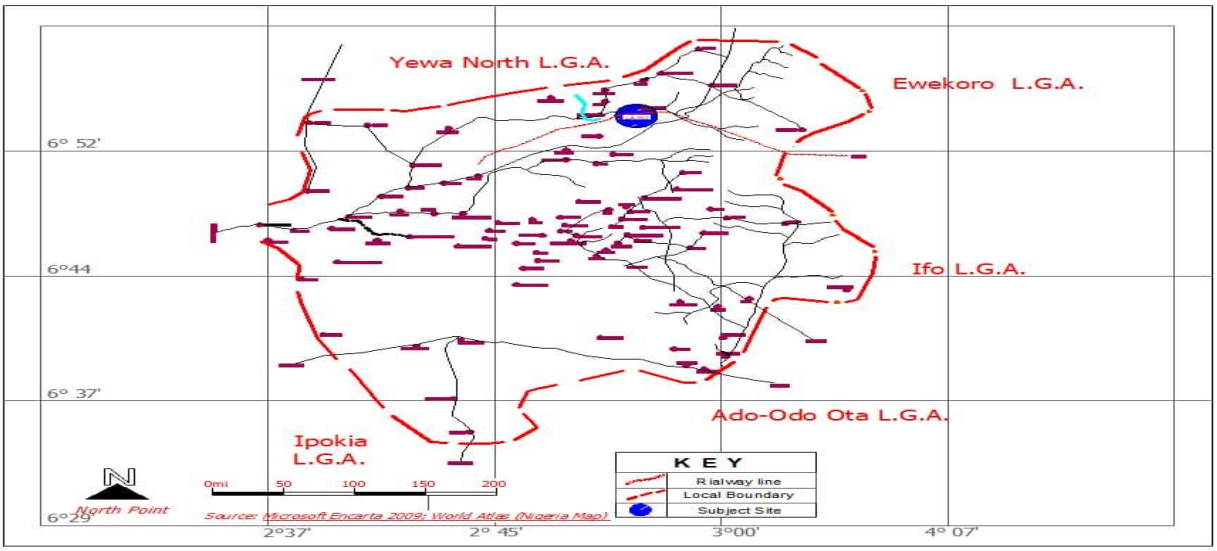


Source: Department of survey and Geo Informatics, Federal polytechnic Ilaro, 2015

MAP OF OGUN STATE SHOWING YEWA SOUTH



Source: Department of survey and Geo Informatics, Federal polytechnic Ilaro, 2022



Source: Microsoft Encarta 2009; World Atlas (Nigeria Map)

Source: Ilaro Zonal Planning Authority,2022.

The study adopted both primary and secondary data in actualizing the research objectives. While the primary data relied on field observation, secondary data essentially depended on relevant extant legal provisions guiding the construction of public buildings. The first objective of this research was achieved through the ground-truthing of the map showing all the buildings within the academic area of the Federal Polytechnic Ilaro, which excludes Gbokoto residential quarters. Recourse was sought to secondary sources in interrogating extant legal provisions guiding the construction of buildings in Nigeria, with emphasis on the mainstreaming of access needs of 'special people'. Total enumeration was adopted in the survey and of all the buildings identified were assessed on the basis of whether they essentially comply with the legal access requirements for people living with disabilities. The accessibility elements understudied include ramps, staircase, width of door or entrance, corridor/hallway and elevators in multi-storey buildings.

III. RESULTS/DISCUSSION

Identification of all the Buildings Within the Academic Area of The Study Area

As evident in Table 1, a total of 147 buildings were identified in the study area and categorised along the dimensions of use and height. Out of the 147 buildings, 3 were observed to be used as banks(2.0%); 1 (0.7%) as sport complex; 42 (27.9 %) as administrative buildings, 2(1.4%) as libraries, 34(23.1%) as lecture rooms; 1 as (0.7%) guest house; 3 (2.0%) for religious purposes; 2 (0.7%) as health centre; 7 (8.8%) as hostels; 4 (2.7%) as halls/conference rooms; 18 (12.2%) as public toilets; 12 (8.2%) as commercial buildings, and 13 (8.8%) as residential buildings. Moreover, of the 147 buildings, 128(87.5%) are bungalows, 19 (12.2%) have 2 floors, and 1(0.006%) has three floors.

Table 1: Showing buildings within the Federal Polytechnic area and their uses and heights

Types Of Public Buildings	No Of Sampled Buildings	(Bungalow)	2 Floors	3 Floors	4 Floors	Percentage
Bank	3	3 (2.0%)	-			2.0
Sport Complex	1	-	1 (0.7%)			0.7
Administrative Office	41	32 (21.7%)	9 (6.1%)			27.9
Library	2	1 (0.7%)	1 (0.7%)			1.4

Lecture Room	34	33 (22.4%)			1(0.7)	23.1
Guest House	1	1 (0.7%)	-			0.7
Religious Building	3	3 (2.0%)	-			2.0
Health Centre	2	2 (1.4%)	-			1.4
Hostels	13	7 (4.7%)	6 (4%)			8.8
Halls/Conference Room	4	3 (2.0%)	1 (0.7%)			2.7
Public Toilet	18	18 (12.2%)	-			12.2
Commercial Buildings	12	12 (8.2%)	-			8.2
Staff Quarters	13	11 (7.4%)	-		2(0.01%)	8.8
Total	147	128 (87.5%)	18 (12.2%)	1 (0.6%)		100%

Source: Researcher's Field Survey (2022).

Determination Of The Access Requirements For People Living With Disabilities, As Established By Relevant Legal Provisions.

Though disability needs have been well captured in Nigeria's building code, the Discrimination against Persons with Disability (Prohibition) Act, 2018 (DAPD) is the primary enforcing the access requirements for people living with disability. The law is divided into 8 parts and 51 sections. It essentially empowers a person with disability to have the right to access the physical environment and buildings on an equal basis with others. Further, it provides that a public building shall be constituted with the necessary accessibility aids such as lifts (where necessary), ramps and any other facility that shall make them accessible to and usable by persons with disabilities. The law equally stipulates a transitory period of five (5) years within which all public buildings and structures, whether immovable or movable which were inaccessible to persons with disabilities are expected to be modified to be accessible to and usable by persons with disability including those on wheelchairs.

Assessment of the Level of Compliance of The Buildings Located Within The Federal Polytechnic Ilaro With The Legal Access Requirements For People Living With Disabilities.

Ramps are slope pathway used both inside and outside a building and it is used to provide access between vertical levels. Ramps provide alternative for stairs for wheelchair users, people with mobility issues or other forms of disabilities. Ramps are used by physically impaired and visually impaired people. Ramps can ease the movement of people with disability especially those on a wheelchair. According to the basic design standard for the disabled, ramps must be available in every public building and must be built at least 36inches and 42 inches wide. Landing should be provided as passing places (at least 1800mm wide x 1800mm long) when it is not possible to see from one end of the ramp to the other or where the ramp has 3 or more flight. A total of 30 (25.5%) buildings within the academic area of the federal polytechnic ilaro made provision for Ramps. As shown in Table 2, out of the 147 buildings of different uses identified in the study area, 1 (0.7%) library, 2 (1.4%) lecture rooms, 1 (0.7%) guest house, 1 (0.7%) religious buildings, 2 (1.4%) health centre, 6 (4%) hostel buildings, 2 (1.4%) halls/ conference rooms, 2 (1.4%) commercial buildings, and 13 (8.8%) residential buildings, making 30 buildings altogether, which represents about 25% made provision for ramps.

Table 2: Level of Compliance to the Provision of Ramps in the Buildings Sampled

Types of Public Buildings	No of Sampled Buildings	Ramps Provided	Ramps Not Provided	Percentage
Banks	3	-	3 (2.0%)	2.0
Sport Complex	1	-	1 (0.7%)	0.7
Administrative/Offices	41	-	41 (27.9%)	27.9
Library	2	1 (0.7%)	1 (0.7%)	1.4
Lecture Rooms	34	2 (1.4%)	32 (21.7%)	23.1

Guest House	1	1 (0.7%)	-	0.7
Religious Building	3	1 (0.7%)	2 (1.4%)	2.0
Health Centre	2	2 (1.4%)	-	1.4
Hostels	13	6 (4%)	7 (4.7%)	8.8
Halls/Conference Room	4	2 (1.4%)	2 (1.4%)	2.7
Public Toilets	18	-	18 (12.2%)	12.2
Commercial Buildings	12	2 (1.4%)	10 (6.8%)	8.2
Staff Quarters	13	13 (8.8%)	-	8.8
Total	147	30 (20.5%)	117 (79.5%)	100%

Source: Researcher's Field Survey (2022).

Simialarly, an elevator is another medium of access that is being used by both people living with disabilities and those without disabilities. Elevators can greatly ease the movement of disabled persons in high rise building. None of the high-rise buildings within the study area is provided with an elevator. The movements of students and members of staff suffering disability would be constrained in the exisiting high rise buildings within the institution.

Table 3: Buildings that Provide Elevators and Conform withTheir FunctionalRequirements.

FACILITY	FUNCTIONAL REQUIREMENTS	BUILDINGS THAT CONFORM WITH THE FUNCTIONAL REQUIREMENT	BUILDINGS THAT DO NOT CONFORM WITH THE FUNCTIONAL REQUIREMENT
ELEVATOR	Accessibility to all levels (floors) generally used by the public	-	-
	Control panel mounted at a height between 0.90m and 1.20m.	-	-

Source: Researcher's Field Survey (2022).

Stairs are provided in 120 (81.6%) of the buildings above one floor in the study area. However, the major deficiencies observed are the unavailability of intermediate handrail and differences in the width of the stairs within the some of the buildings.

Table 4: Level of Compliance with the Provision of Staircase in the Building

Banks	3	3 (2.0%)	-	2.0
Sport Complex	1	1 (0.7%)	-	0.7
Administrative/Offices	41	31 (21.0%)	10 (6.7%)	27.9
Library	2	2 (1.4%)	-	1.4
Lecture Rooms	34	30 (20.0%)	4 (2.7%)	23.1
Guest House	1	1 (0.7%)	-	0.7
Religious Building	3	3 (2.0%)	-	2.0
Health Centre	2	2 (1.4%)	-	1.4
Hostels	13	10 (6.7%)	3 (2.0%)	8.8
Halls/Conference Room	4	4 (2.7%)	-	2.7
Public Toilets	18	14 (9.5%)	4 (2.7%)	12.2
Commercial Buildings	12	9 (6.1%)	3 (2.0%)	8.2
Staff Quarters	13	10 (6.7%)	3 (2.0%)	8.8
Total	147	120 (81.6%)	27 (18.4%)	100%

Source: Researcher's Field Survey (2022).

Doors and opening are very essential in the accessibility of person with disability in a building. The width and sizes of doors are very vital in this research. The standards sizes of Doors/Entrances, which formed the basis of the assessment were 30 - 32 inches wide and 60 - 64 inches. All the buildings, regardless of if their doors were of single or double entrances complied with access requirements for people living with disability. However, it is worthy of note that none of the doors can be easily opened by special people.

Table 5: Accessibility of Wheelchair with the Standard Width of Doorways/Entrances

Types of Public Buildings	No of Sampled Buildings	Single Door (30 & 32 Inches Wide)	Double Door (60 & 64 Inches Wide)	Percentage
Banks	3	3 (2.0%)	-	2.0
Sport Complex	1	-	1 (0.7%)	0.7
Administrative/Offices	41	36 (21.2%)	5 (6.7%)	27.9
Library	2	-	2 (1.4%)	1.4
Lecture Rooms	34	-	34 (23.1%)	23.1
Guest House	1	-	1 (0.7%)	0.7
Religious Building	3	-	3 (2.0%)	2.0
Health Centre	2	-	2 (1.4%)	1.4
Hostels	13	-	13 (8.8%)	8.8
Halls/Conference Rooms	4	-	4 (2.7%)	2.7
Public Toilets	18	18 (12.2%)	-	12.2
Commercial Buildings	12	2 (1.4%)	10 (6.8%)	8.2
Total	147	72 (45.6%)	75 (54.3%)	100%

Source: Researcher's Field Survey (2022).

IV. CONCLUSION/RECOMMENDATION

The purpose of this study is to determine the "access requirements of people suffering disability within the Federal Polytechnic Ilaro, with emphasis on wheelchair accessibility from the exterior, and into the buildings. The study reveals the level of compliance of the buildings to legal access requirements, considering that access to public buildings within the study area by the disabled is imperative to their state of wellbeing. Federal Polytechnic Ilaro as a leading higher technical and vocational training center ought to be taking the lead in ensuring that all its buildings enable adequate and congenial access for people suffering disability as an inclusion strategy. There is need for the Federal Polytechnic Ilaro, a leading higher technical and vocational training center to better respond to the access needs of disadvantaged people, especially those suffering disability. While it is commendable that new buildings being constructed in the Institution are complying with the Disability Act, most of the old buildings still leave much to be desired in terms of conformity. It is worthy of note that most of the buildings assessed in the study were constructed before the Disability Act was enacted. However, there is a provision that from the commencement of the Act, there shall be a transitory period of five (5) years within all public buildings and structures, whether immovable or movable which were inaccessible to persons with disabilities shall be modified to be accessible to and usable by persons with disability including those on wheelchairs. To this extent, the strategic plan of the institution should emphasize the integration of the special access needs of people living with disability in the existing facilities. The implementation stage should carefully ensure that all buildings within the Polytechnic are made to fully conform with the Disability Act. of 2018.

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Statements and Declarations

Competing Interests: The authors have no relevant financial or non-financial interests to disclose.

Ethical Approval: Not applicable.

Data Availability Statement: the field data that formed the basis of the study's results can be made available upon reasonable request.

Author Contributions: All authors were involved in the production and writing of the manuscript.

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